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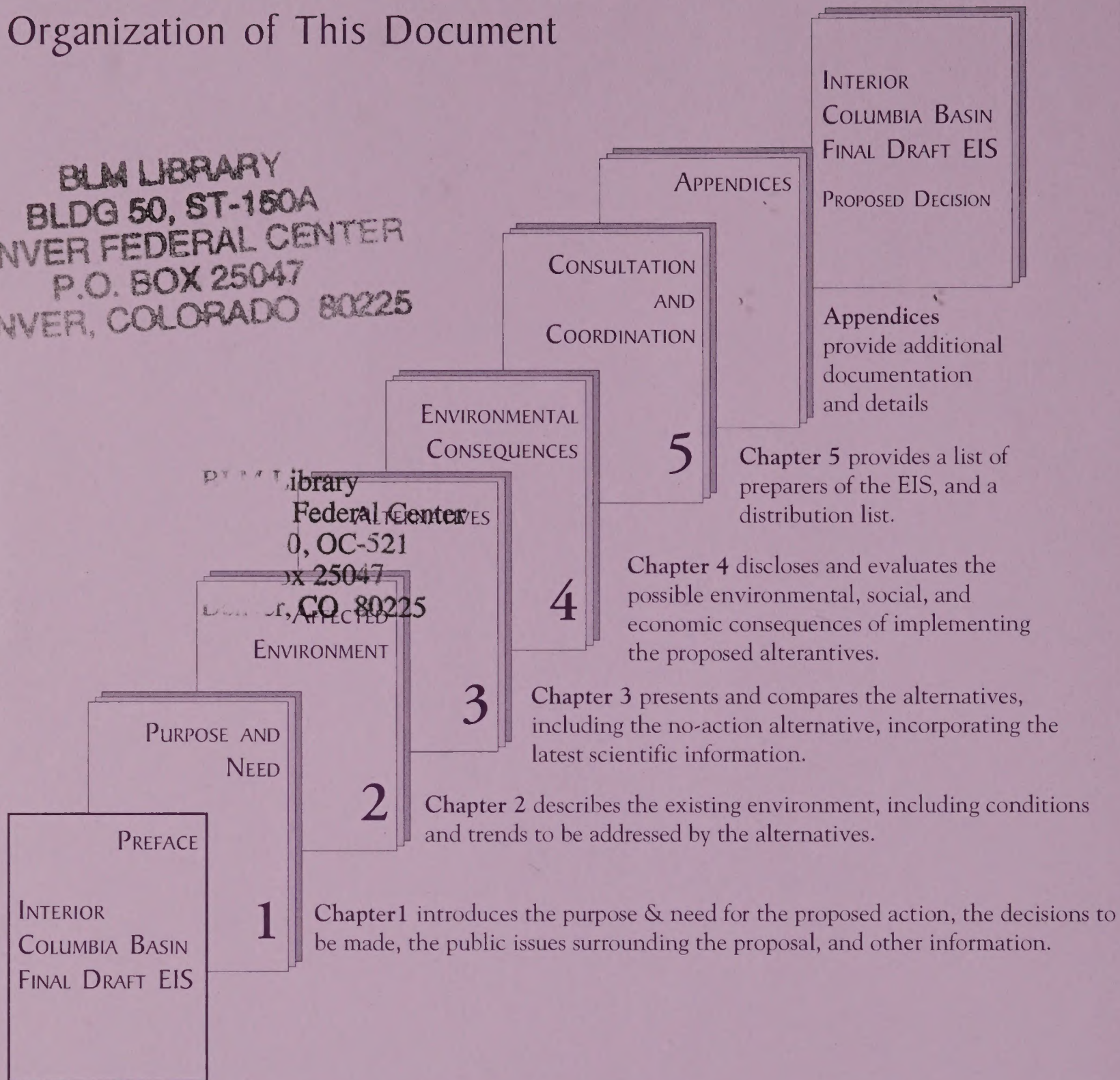
Interior Columbia Basin Ecosystem Management Project

Interior Columbia Basin Final Environmental Impact Statement

December 2000

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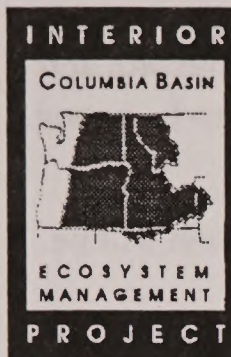


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Interior Columbia Basin Ecosystem Management Project

P.O. Box 2344
Walla Walla, WA 99362
(509)522-4030 Fax: (509)522-5025
TTY: (509)522-4029

304 N. 8th Street
Room 250
Boise, ID 83702
(208)334-1770 Fax: (208)334-1770

Dear Reader:

This package contains two documents: the Final Environmental Impact Statement (EIS) for the Interior Columbia Basin Ecosystem Management Project (ICBEMP), and the proposed decision for the project. The Final EIS incorporates by reference the Supplemental Draft EIS, issued in March 2000. Therefore, it may be useful to use the Supplemental Draft EIS and the document in this package together, depending on the sections of interest.

The Final EIS responds to the comments we received on the Supplemental Draft EIS and reflects several clarifying changes, as explained in the preface. The proposed decision is the preferred alternative (Alternative S2) from the Supplemental Draft EIS, with refinements made in response to public comment and internal review.

Reaching a Final EIS and proposed decision for this project has involved close collaboration among the Forest Service, Bureau of Land Management, National Marine Fisheries Service, U.S. Fish and Wildlife Service, Environmental Protection Agency, tribes, other federal agencies, and state and local governments. The public was instrumental in reviewing, commenting, and suggesting improvement for the documents. We greatly appreciate your participation over the past six years.

If you have participated in this ICBEMP planning process and have an interest that is, or may be, affected by approval of the proposed decision, you may protest such approval. The Bureau of Land Management and the Forest Service will both use this protest process to provide the opportunity for administrative review of the proposed decision. The Forest Service appeal process, familiar to some readers, will not be used in reaching the Record of Decision. A protest may raise only those issues which were submitted for the record during the planning process.

To protest the approval of the proposed decision for the Interior Columbia Basin Ecosystem Management Project use the following procedure:

- ♦ Put the protest in writing and mail it to the following address:
Director, Bureau of Land Management, and Chief, Forest Service
ICBEMP Protests
PO Box 65480
Washington, DC 20035
- ♦ The protest shall be filed within 30 days of the date the Environmental Protection Agency publishes the notice of receipt of the Final Environmental Impact Statement in the *Federal Register* (expected in mid December 2000). Public announcement of the exact date for protests will be made through local media and posted on the project website (www.icbemp.gov) when it is known.
- ♦ The protest shall contain:
 - ✓ The name, mailing address, telephone number, and interest of the person filing the protest;
 - ✓ A statement of the issue or issues being protested;
 - ✓ A statement of the part or parts of the proposed decision being protested;

- ✓ A copy of all documents addressing the issue or issues that were submitted during the planning process by the protesting party or an indication of the date the issue or issues were discussed for the record; and
- ✓ A concise statement explaining why the responsible officials' proposed decision is believed to be wrong.

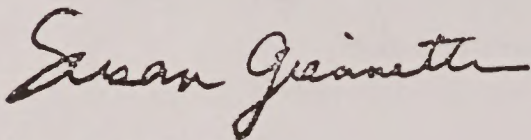
The BLM Director and the Forest Service Chief will promptly render a joint decision on the protest. The protest decision will be in writing and will set forth the reasons for the decision. The protest decision will be sent to the protesting party by certified mail, return receipt requested.

The joint decision of the Director and Chief shall be the final decision on the protest of the Department of the Interior and the Department of Agriculture.

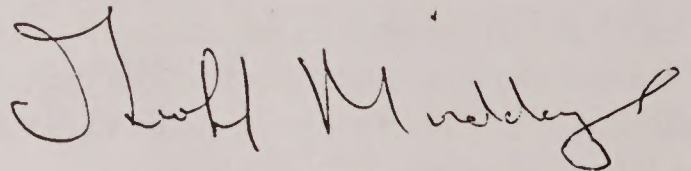
Reviewers who do not protest the proposed decision on the project may not preserve their standing to litigate the final decision.

Once any protests are resolved, the responsible officials of the Forest Service and Bureau of Land Management will sign the Record of Decision for the project.

For further information, please call Susan Giannettino, Project Manager, or Geoff Middaugh, Deputy Project Manager, at (208) 334-1770; or write to ICBEMP, 304 North 8th St., Room 250, Boise, Idaho 83702.



Susan Giannettino
Project Manager



Geoff Middaugh
Deputy Project Manager

Interior Columbia Basin Ecosystem Management Project

Interior Columbia Basin Final Environmental Impact Statement

Lead Agencies

*USDA Forest Service, Intermountain, Pacific Northwest, and Northern Regions
USDI Bureau of Land Management, Idaho, Montana, Oregon, and Washington*

Responsible Officials

*Dale Bosworth, Regional Forester, Forest Service Northern Region
Jack Blackwell, Regional Forester, Forest Service Intermountain Region
Harv Forsgren, Regional Forester, Forest Service Pacific Northwest Region
Martha Hahn, Idaho State Director, BLM
Mat Millenbach, Montana State Director, BLM
Elaine Zielinski, Oregon/Washington State Director, BLM*

For further information contact

*Susan Giannettino, Project Manager
304 N. 8th Street, Room 250
Boise, ID 83702
Telephone 208/334-1770; Fax 208/334-1769*

*Geoff Middaugh, Deputy Project Manager
P.O. Box 2344
Walla Walla, WA 99362
Telephone 509/522-4033; Fax 509/522-4025*

Abstract

The U. S. Department of Agriculture, Forest Service, and the U. S. Department of the Interior, Bureau of Land Management (BLM), propose to develop and implement a coordinated, scientifically sound, broad-scale, ecosystem-based management strategy for lands they administer across parts of Idaho, Oregon, Montana, and Washington (approximately 63 million acres). The Interior Columbia Basin Ecosystem Management Project (ICBEMP) Final Environmental Impact Statement (EIS) presents three management alternatives. *Alternative S1*, the no-action alternative, would continue current management on individual units of Forest Service- and BLM-administered lands under the 62 approved plans, as amended or modified by interim direction known as PACFISH, INFISH, and Eastside Screens, and by applicable Biological Opinions. *Alternatives S2 and S3* focus on restoring and maintaining ecosystems with consistent management direction across the project area and providing for the social and economic needs of people, while reducing short- and long-term risks to natural resources from human and natural disturbances. Under *Alternative S2*, an emphasis on conducting analyses (such as Subbasin Review and Ecosystem Analysis at the Watershed Scale) prior to conducting management activities is intended to minimize short-term risk from management activities in areas where short-term risks are of most concern, and to ensure actions occur in the most appropriate locations in the most appropriate sequence. Under *Alternative S3*, some short-term risk is acceptable, and less emphasis is placed on conducting Subbasin Review and Ecosystem Analysis at the Watershed Scale prior to conducting management activities. More areas are identified under *Alternative S3* as high priority for restoration compared to *Alternative S2*.

The Regional Executive Steering Committee identified *Alternative S2* as the preferred alternative, because they feel it responds best of all 10 alternatives (from the Draft EISs and the Supplemental Draft EIS) to the purpose and need statements and the five goals under the refined focus. The analysis of effects of the alternatives indicates that *Alternative S2* would provide the strongest and best strategy for: restoring the health of the forests, rangelands, and aquatic-riparian-hydrologic ecosystems in the project area; recovering plant and animal (including fish) species; avoiding future species listings; providing a predictable level of goods and services from the lands administered by the BLM and the Forest Service; and best addressing tribal rights and interests. Mitigation of adverse effects has been incorporated into the preferred alternative. Monitoring, determined to be an important part of adaptive management, is outlined in the Implementation Framework.

The preferred alternative in the Supplemental Draft EIS, *Alternative S2*, has been modified in response to internal (Forest Service and BLM) review and public comments. It is presented, in its entirety, as the Interior Columbia Basin Final EIS: Proposed Decision. The changes reflected in the Final EIS are within the scope and the range of effects projected in the Draft and Supplemental Draft EISs.

The Final EIS incorporates the Supplemental Draft EIS by reference; therefore, it may be useful to use the two documents together, depending on which sections the reader is interested in.

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Preface

Introduction

This Interior Columbia Basin Ecosystem Management Project (ICBEMP) Final Environmental Impact Statement (Final EIS) was developed by the U.S. Department of Agriculture (Forest Service) and the U.S. Department of the Interior (Bureau of Land Management [BLM]), in collaboration with the Environmental Protection Agency, U.S. Fish and Wildlife Service, and National Marine Fisheries Service. The Draft EISs (Eastside and Upper Columbia River Basin) were published and distributed in June 1997 and the Supplemental Draft EIS was published and distributed in March 2000.

The EIS describes and evaluates a range of reasonable alternatives for managing BLM- and Forest Service-administered lands in the interior Columbia Basin, upper Klamath Basin, and parts of the Great Basin. It also describes the environmental consequences of those alternatives.

Seven alternatives were presented and evaluated in the Draft EISs. Almost 83,000 letters and postcards were received during the 11-month comment period on the Draft EISs. The ICBEMP strategy was redesigned and refocused based on: these public comments; input from the Forest Service, BLM, and the Science Advisory Group; new scientific information; and discussions with tribal and interagency partners. As a result of this new approach, three alternatives were presented and evaluated in the Supplemental Draft EIS. Alternative S1, which would continue

current management (referred to as the “no-action alternative” in the National Environmental Policy Act) is the same as Alternative 2 in the Draft EISs, as updated with current information. Alternative S2, the preferred alternative, was based on Alternative 4, the preferred alternative in the Draft EISs, but it was redesigned and refocused based on public comments. Alternative S3 is similar to the preferred alternative, but with the acceptance of more short-term risk.

Approximately 530 letters and e-mails were received during the concurrent 3-month comment period on the Supplemental Draft EIS and 4-month comment period on the *Report to the Congress on the Interior Columbia Basin Ecosystem Management Project (Report to the Congress)*.

The Final EIS consists of this document and the Supplemental Draft EIS (which is incorporated by reference, in accordance with Council of Environmental Quality [CEQ] regulations). Therefore, it may be useful to use the Supplemental Draft EIS and this document together, depending on which sections the reader is interested in. The proposed decision is enclosed as a separate document (The Interior Columbia Basin Final Environmental Impact Statement: Proposed Decision).

Copies of the Supplemental Draft EIS can be found on the project's website (www.icbemp.gov), by calling the project office at (208) 334-1770, or by writing to ICBEMP, 304 N. 8th Street, Room 250, Boise, ID 83702. Copies are also available for viewing in Forest Service and BLM offices throughout the project area.

The Final EIS, including the incorporated material, was prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, as amended, and contains the following:

- ♦ A statement of the purpose and need for the action (Chapter 1). This chapter also provides background for the ICBEMP, and describes the proposed action, project area, decisions to be made, and the public involvement process, including planning issues.
- ♦ A description of the affected environment, including the existing condition of the project area and trends from historical conditions (Chapter 2).
- ♦ A description of all the alternatives analyzed in detail (Chapter 3), including the preferred alternative/proposed decision (Proposed Decision document).
- ♦ An analysis of potential environmental, social, and economic consequences of implementing each alternative (Chapter 4).
- ♦ Other information required by NEPA (such as the list of preparers of this document, as well as a list of tribes, agencies, organizations, businesses, and groups who either contacted or were contacted by the project staff in Chapter 5; Glossary, Literature Cited, and Index; and the response to public comments on the Supplemental Draft EIS).
- ♦ Appendices.

Protest Process

The Forest Service and BLM decision-makers agreed to use one administrative review process—the BLM's protest process.

Any person who participated in the planning process and has an interest that is or may be adversely affected by the approval of the proposed decision may protest the approval. A protest may raise only those issues which were submitted for the record during the planning process.

To protest the proposed decision, the steps outlined in the cover letter of the Final EIS must be followed. **The protest must be in writing and mailed to the Director of the BLM and the Chief of the Forest Service within 30 days of the date the Environmen-**

tal Protection Agency publishes the notice of receipt of the Final EIS in the *Federal Register*. Several pieces of information need to be included in the protest, including the interest that could be affected by the proposed decision, the issue or issues being protested, copies of the documents submitted by the protesting party during the planning process or an indication of the dates the issues were discussed, and a statement explaining why the proposed decision is believed to be wrong.

The BLM Director and Forest Service Chief will render a joint decision on the protest. This will be the final decision of the Departments of the Interior and Agriculture.

The BLM and Forest Service will issue one Record of Decision (ROD), which will be signed (approved) by the BLM State Directors and Forest Service Regional Foresters within the project area. Any portion of the proposed decision being protested will not be approved until the protest is resolved.

Reviewers who do not request administrative review of the proposed decision may not preserve their standing to litigate the final decision.

Differences Between the Supplemental Draft and Final EIS

Changes, corrections, and clarifications have been made to the Supplemental Draft EIS based on public comments and internal review. Most of the changes were made to improve the clarity and intent of the management direction. The changes reflected in the Final EIS are within the scope and analysis of the Draft and Supplemental Draft EISs and do not alter the analysis of the environmental consequences. (The Science Advisory Group reviewed the changes made to the alternatives and determined that only minor differences in effects were evident, except for those related to the changes to the A1/A2 subwatersheds; however, even those changes in effects are still within the range of effects projected in their analysis of Supplemental Draft EIS alternatives.)

The preferred alternative in the Supplemental Draft EIS, Alternative S2, has been modified in response to internal (Forest Service and BLM) review and public

comments. It is presented, in its entirety, as the Interior Columbia Basin Final EIS: Proposed Decision.

Each chapter and appendix in the Final EIS consists of a summary followed by the specific changes to that chapter/appendix. Following is a summary of those changes:

Chapter 1

- ◆ Made minor edits to a few sections.
- ◆ Added a paragraph describing a *Draft Basin-wide Salmon Recovery Strategy*.
- ◆ Updated the Roadless Areas Policies section.
- ◆ Added sections on Other Forest Service Proposed Regulations and the Forest Service Cohesive Strategy.

Chapter 2

- ◆ Corrected erroneous numbers and dates.
- ◆ Better described the criteria used to select the species analyzed in the Draft and Supplemental Draft EISs.
- ◆ Updated information on species listings.
- ◆ Updated and corrected wildlife information; corrected carnivore habitat map (Map 2-11b).
- ◆ Added a section and a new map (Map 2-28a) of Natural Areas.
- ◆ Added an evaluation of how the year 2000 wildfires affected the ecosystem conditions in the interior Columbia Basin.

The changes reflected in the Final EIS are within the scope and analysis of the Draft and Supplemental Draft EISs and do not alter the analysis of the environmental consequences.

Chapter 3

- ◆ Modified the definitions of Guideline and Objective.
- ◆ Clarified the management intent that threatened and endangered species direction takes precedence over other ICBEMP direction

(if it conflicts).

- ◆ Clarified the management intent for Step-Down (Subbasin Review and Ecosystem Analysis at the Watershed Scale).
- ◆ Clarified the definition and use of collaboration.
- ◆ Added an objective to assess risks of prescribed fire and wildfires.
- ◆ Clarified and strengthened management direction for coordinating smoke management and monitoring.
- ◆ Clarified management intent of Road Management and added a sidebar summarizing Roads Management Intent.
- ◆ Added a sidebar on prioritizing terrestrial restoration and conservation opportunities.
- ◆ Clarified management direction for determining snag numbers.
- ◆ Updated the management direction for watershed condition indicators to reflect that the U.S. Fish and Wildlife Service and National Marine Fisheries Service matrices of pathways and indicators of biological and habitat conditions were combined.
- ◆ Clarified the management direction relating to recovery plans.
- ◆ Clarified the management direction and intent for providing predictable and sustainable resources.
- ◆ Clarified the intent of funding for restoration management activities.
- ◆ Clarified management intent and direction for T watersheds.
- ◆ Modified management intent, criteria, and direction for A1 and A2 subwatersheds to reflect a validation exercise conducted in summer 2000; added new map showing the revised A1/A2 subwatersheds (Map 3-11a).

Chapter 4

- ◆ Corrected Map 4-4 (data for eastern Oregon and eastern Washington was unintentionally left off).
- ◆ The Science Advisory Group (SAG) explored various options to further slow the decline of certain rangeland terrestrial habitats. Added two sidebars summarizing this additional work on the modeled outcomes for sage grouse and Columbian

sharp-tailed grouse.

- ♦ Clarified grizzly bear outcomes.
- ♦ Added change in effects from validating the criteria for the A1 and A2 subwatersheds and updating the data. (All of the effects remain within the range of effects discussed in the Supplemental Draft EIS.)
- ♦ Modified the outcomes for grasshopper sparrow, northern goshawk (summer), Lewis' woodpecker, hoary bat due to an analysis error.
- ♦ Clarified the use of the term Animal Unit Months (AUMs) by adding the word "authorized", where appropriate.
- ♦ Added a section on effects of the alternatives on natural areas.
- ♦ Expanded the discussion of cumulative effects to address the *Cohesive Strategy for Protecting People and Sustaining Resources in Fire-Adapted Ecosystems*, and the Fiscal Year 2001 wildland fire emergency appropriations.

Chapter 5

- ♦ Updated the List of Preparers.

Appendices

- ♦ Combined and updated Appendix 3 (Public Involvement) and Appendix 4 (Response to Comments). Added responses to public comments on the Supplemental Draft EIS and on the Report to the Congress (as required in the 2000 Interior and Related Agencies Appropriations language).
- ♦ Made minor editorial corrections to Appendix 7 (Socio-Economic Information for Counties and Communities).

- ♦ Updated Appendix 9 (Additional Aquatics Guidance and USFWS and NMFS Matrices) to describe the combined matrices from the U.S. Fish and Wildlife Service and National Marine Fisheries Service and their intended use as measureable indicators.
- ♦ Added a section on an implementation organization and a section on implementation monitoring to Appendix 10 (Implementation Framework).
- ♦ Made minor editorial corrections to Appendix 12 (Requirements for Snags and Downed Wood).
- ♦ Added additional assumptions made by SAG while they reviewed the changes made to the Supplemental Draft EIS to Appendix 16 (Science Advisory Group Assumptions for Modeling the Supplemental Draft EIS Alternatives).
- ♦ Clarified the use of the terms "old forest" and "late-seral forest" in Appendix 17a (Definitions for Old Forest).
- ♦ Added a new appendix, Appendix 18 (A1 and A2 Subwatershed Update Process).

Glossary, Literature Cited, Index

- ♦ Created an abbreviated Glossary (subset of words from the full Glossary in the Supplemental Draft EIS). Revised some definitions for clarity and consistency and added a few new definitions.
- ♦ Created an abbreviated Literature Cited, based on what is cited in the Final EIS and proposed decision.
- ♦ Updated terms and page numbers for the index.

Chapter 1

Purpose and Need

Chapter 1 of the Supplemental Draft EIS is incorporated by reference, in accordance with 40 CFR 1500.4(j) and (o), 1502.21 and 1506.4. The incorporated material can be found on pages 1-1 through 1-28 in Volume 1 of the Supplemental Draft EIS. The content is briefly summarized below, with changes based on public comment and internal review following the summary.

Summary

Proposed Action

The Forest Service and Bureau of Land Management (BLM) propose to develop and implement a coordinated, scientifically sound, broad-scale, ecosystem-based management strategy for lands they administer across parts of Idaho, Oregon, Montana, and Washington (approximately 63 million acres; see Map 1-1). The selected strategy will amend the 62 land use plans currently in effect on 32 Forest Service or BLM administrative units in the project area.

Changed conditions over the past century, new information, and enhanced understandings indicate that the ecosystems of the interior Columbia River Basin are declining in health. Improving the health, diversity and productivity of these ecosystems will support cleaner air and water, healthier populations of fish and wildlife, and help meet the needs of

current and future generations. To address these changed conditions, seven alternatives were developed, analyzed, and presented in the Eastside and Upper Columbia River Basin Draft Environmental Impact Statements (Draft EISs; June 1997) for the Interior Columbia Basin Ecosystem Management Project (ICBEMP). Public comment, input from federal agencies and the Science Advisory Group, new scientific information, and discussions with tribal and interagency partners gave rise to a need for redesign and refocus of the project. In response, three management alternatives were developed, analyzed, and presented in a Supplemental Draft EIS (March 2000).

A subsequent Record of Decision (ROD) for this EIS will provide the context to help managers make sound local decisions while considering effects, particularly cumulative effects, at a scale larger than individual administrative units.

Purpose and Need

The purpose of the proposed action is to select a coordinated, broad-scale strategy that best achieves a combination of the following:

- ♦ Restore and maintain long-term ecosystem health and ecological integrity.
- ♦ Support economic and/or social needs of people, cultures, and communities, and provide sustainable and predictable levels of products and services from lands administered by the Forest

Service or the BLM, including fish, wildlife, and native plant communities.

- ♦ Update or amend, if necessary, current Forest Service and BLM management plans with long-term direction, primarily at regional and subregional levels.
- ♦ Provide consistent direction at regional and subregional levels to assist federal managers in making decisions at a local level within the context of broader ecological considerations.
- ♦ Emphasize adaptive management over the long term.
- ♦ Help restore and maintain habitats of plant and animal species, especially those of threatened, endangered, and candidate species, and of special interest to tribes.
- ♦ Provide opportunities for cultural, recreational, and aesthetic experiences.
- ♦ Provide long-term, broad-scale management direction that will replace interim strategies (PACFISH, Eastside Screens, and Inland Native Fish Strategy).

The alternative management strategies in this EIS are based on underlying needs for:

- ♦ **Restoration and maintenance of long-term ecosystem health and ecological integrity on Forest Service- and BLM-administered lands.** There is a need to restore and maintain forest, rangeland, aquatic, and riparian ecosystem health and integrity. There is also a need to identify desired conditions of vegetation structure, composition, and distribution; hydrologic processes and functions; and aquatic habitat structure and complexity.
- ♦ **Support of the economic and/or social needs of people, cultures, and communities, through availability of sustainable and predictable levels of products and services from Forest Service- and BLM-administered lands.** There is a need to contribute to the vitality and resiliency of human communities. There is also a need to provide for people's uses and values of natural resources consistent with maintaining healthy, diverse ecosystems.

Project Area

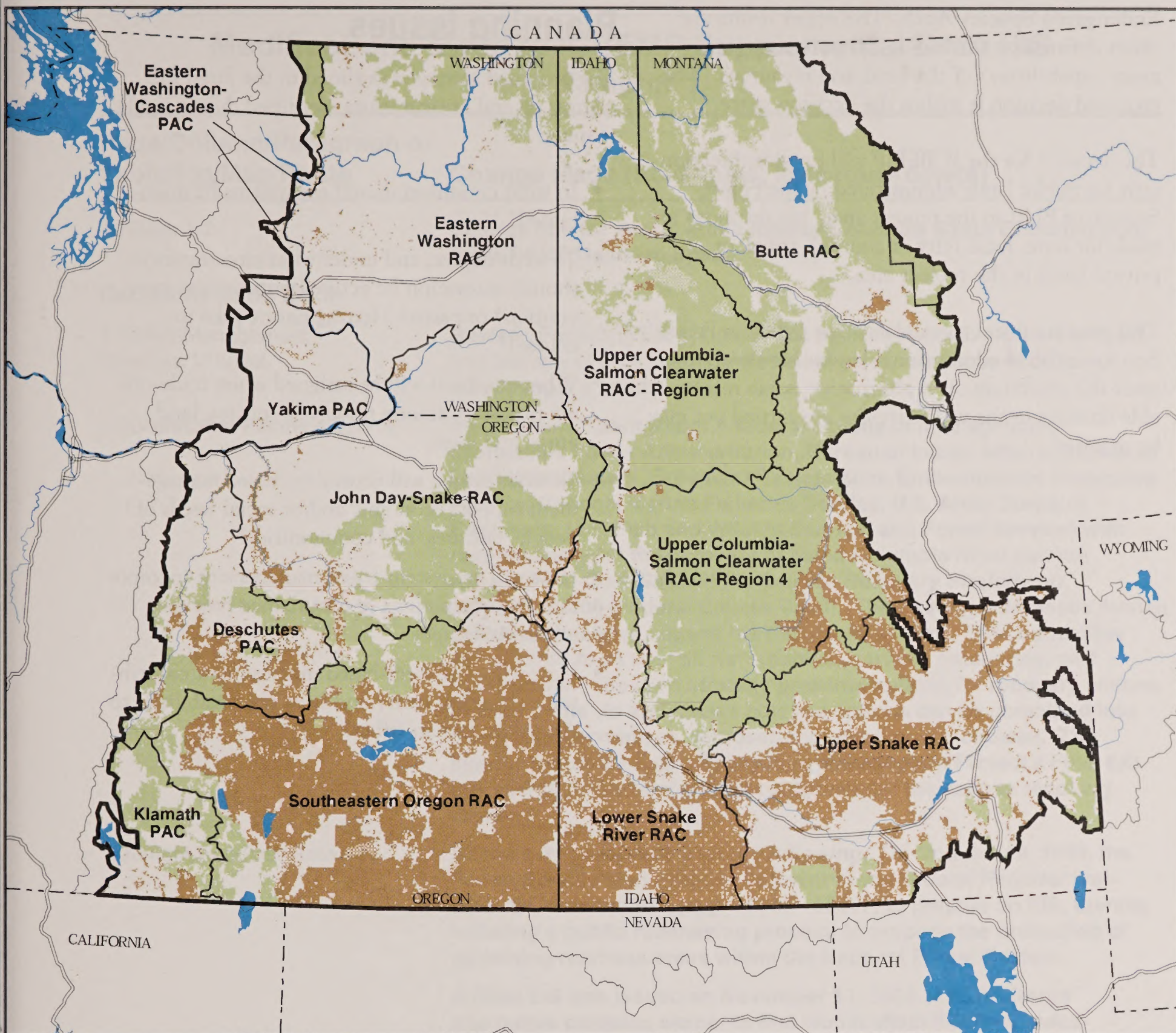
The ICBEMP project area includes approximately 63 million acres of land administered by the BLM or Forest Service in the portions of the interior Columbia River Basin, upper Klamath Basin, and northern Great Basin that lie east of the range of the northern spotted owl (east of the Northwest Forest Plan boundary) in Oregon and Washington, and the parts of Idaho and western Montana that are drained by the Columbia and Snake rivers. Map 1-1 shows these agency-administered lands to which the proposed decision (Alternative S2) applies. It also shows Resource Advisory Council (RAC) and Provincial Advisory Committee (PAC) boundaries. It is intended that some of the implementation and coordination will be conducted by RAC or PAC area. See Table 1-1 (page 1-7, Chapter 1 of Supplemental Draft EIS) for list of national forests and BLM districts affected by this EIS.

Decisions to be Made

The broad-scale nature of this EIS does not include site-specific decisions. Those decisions will be made by local managers (BLM district managers, field office managers, and area managers; and forest supervisors and district rangers) during finer-scale planning processes within the context of the broad-scale ICBEMP direction.

Decisions that are not within the scale or the scope of the ICBEMP decision, and therefore will not be included in the Record of Decision, include: statutory requirements, national policy, specific allocations of resource products, funding levels and allocations, activity plan-level decisions, site-specific-level decisions, and administrative actions for which a land use plan decision is not needed.

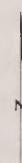
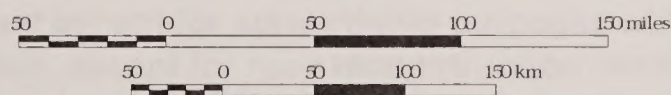
The *decision space* for this EIS defines which decisions deciding officials can make (such as management actions on lands they administer) and cannot make (such as decisions assigned to another agency). The lower limits of decision space are often defined by minimum requirements or conditions (thresholds) required by federal and state laws (such as the Clean Water Act and










Map 1-1.
BLM- and Forest Service-
Administered Lands

INTERIOR COLUMBIA
BASIN ECOSYSTEM
MANAGEMENT PROJECT

Final EIS
2000



- | | | | |
|--|-----------------------------------|---|----------------------|
|  | Forest Service-Administered Lands |  | Major Rivers |
|  | BLM-Administered Lands |  | Major Roads |
|  | Water |  | RAC/PAC Borders |
| | |  | Planning Area Border |

Endangered Species Act). The upper limits are often defined by the biological potential (maximum capabilities) of the land and resources. The proposed decision is within the decision space.

The decision for the ICBEMP will provide direction only for public lands administered by the Forest Service or BLM in the project area. No decisions are made for state, local (city or county), tribal, or private lands in the project area.

This plan is subject to valid existing rights on Forest Service or BLM-administered lands. However, to meet the objectives of an alternative, some reasonable changes in the way activities are carried out may be required.

Planning Issues

The proposed strategies outlined in the Final EIS address several critical issues identified during public scoping:

- ♦ In what condition should ecosystems be maintained?
- ♦ To what degree, and under what circumstances should restoration be active (with human intervention) or passive (letting nature take its course)?
- ♦ What emphasis will be assigned when trade-offs are necessary among resources, species, land areas, and uses?
- ♦ To what degree will ecosystem-based management support economic and/or social needs of people, cultures, and communities?
- ♦ How will ecosystem-based management incorporate the interactions of disturbance processes across landscapes?
- ♦ How will ecosystem-based management contribute to meeting treaty and trust responsibilities to American Indian tribes?

Modifications Made to ICBEMP Supplemental Draft EIS

Chapter 1

Page/Column/Paragraph or Table/Fig/Map/Photo

Change Made (bold = new; strikeout = delete)

1-8/Map 1-2

Change title to: Areas within Interior Columbia Basin Excluded from the ICBEMP Decision Space.

Decisions to be Made

1-15/left/Management
Priorities/1st bullet

Revise: Protecting Ecosystems. The agencies work to ensure the health and diversity of ecosystems ~~while meeting people's needs in order to~~ **meet people's needs.**

1-20/left/Other Planning Efforts

Insert after 3rd paragraph: A federal caucus of nine agencies (Bonneville Power Administration, Bureau of Indian Affairs, Bureau of Land Management, Bureau of Reclamation, Environmental Protection Agency, National Marine Fisheries Service, U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, and Forest Service) with responsibility for the recovery of listed Columbia River salmon released the *Draft Basin-Wide Salmon Recovery Strategy* on July 27, 2000 (Federal Caucus 2000). The strategy addresses human activities that have caused the decline of salmon. These activities are referred to as the "all Hs" - habitat, harvest, hatcheries, and hydropower. The draft strategy presents options for recovery actions in each of the Hs and shows how the options can be combined into integrated alternatives, representing broad policy choices. The Interior Columbia Basin Ecosystem Management Project's Final EIS represents the *federal habitat component* of the salmon recovery strategy.

1-20/right/Roadless Area

Replace 3rd paragraph with the following: On October 19, 1999, the Forest Service filed a Notice of Intent in the *Federal Register* (volume 64, number 201, page 56306 - 56307) to prepare an EIS, thereby initiating a public rulemaking process to propose the protection of remaining roadless areas within the National Forest System.

A Final EIS was issued on November 13, 2000. The preferred alternative contains elements that would affect Forest Service-administered lands within the ICBEMP project area. The preferred alternative would prohibit road construction, reconstruction, and timber harvest except for stewardship purposes within inventoried roadless areas, except for road reconstruction needed for road safety improvements, and Federal Aid Highway Projects. Stewardship purpose timber harvest could only be used where it maintains or improves roadless characteristics and:

- ♦ improves threatened, endangered, proposed, or sensitive species habitat;
- ♦ reduces the risk of uncharacteristic wildfire effects; or
- ♦ restores ecological structure, function, processes, or composition.

Social and economic mitigation measures are incorporated into the preferred alternative.

The final decision will be documented in a Record of Decision and final rule, which is expected in December 2000.

Modifications Made to ICBEMP Supplemental Draft EIS Chapter 1 (Continued)

Page/Column/Paragraph or
Table/Fig/Map/Photo

Change Made (bold = new; strikeout = delete)

1-21/left/top of column

Insert at the top of the page:

Other Forest Service Proposed Regulations

The Forest Service has two other ongoing or recently completed rulemaking efforts related to the proposed Roadless Area Conservation Rule and to ICBEMP: the National Forest System Land and Resource Management Planning Rule and the proposed National Forest System Road Management and Transportation System Rule. The planning rule revises the framework for National Forest System planning and management; makes sustainability the foundation for National Forest System planning and management; establishes requirements for implementation, monitoring, evaluation, amendment, and revision of land and resource management plans; ensures collaboration with the public; integrates science into the process; and incorporates new information and opportunities. The final rule was published on November 8, 2000.

The proposed road management rule would revise regulations concerning the development, use, maintenance, and funding of the National Forest transportation system to shift the emphasis from transportation development to sustaining environmentally sound access. Road construction and reconstruction in inventoried roadless and other unroaded areas would require a science-based roads analysis and a Regional Forester-signed EIS. The final road management policy is scheduled for completion by late 2000.

Forest Service Cohesive Strategy

On October 13, 2000 the Forest Service issued *Protecting People and Sustaining Resources in Fire-Adapted Ecosystems: A Cohesive Strategy*. The strategy establishes a framework to restore and maintain ecosystem health in fire-adapted ecosystems for priority areas across the interior West, including Forest Service-administered lands in the ICBEMP project area. The intent is to:

- ◆ Improve the resilience and sustainability of forests and grasslands at risk;
- ◆ Conserve priority watersheds, species, and biodiversity;
- ◆ Reduce wildland fire costs, losses, and damages; and
- ◆ Better ensure public and firefighter safety.

Page/Column/Paragraph or
Table/Fig/Map/Photo

Change Made (bold = new; strikeout = delete)

The *Cohesive Strategy* focuses treatment on: urban-rural-wildland, readily accessible municipal watersheds, threatened and endangered species habitat, and maintenance of existing low risk "Vegetation Condition Class 1" areas. These are areas where fire regimes are within or near the historical range of variability, the risk of losing key ecosystem components is low, and plant species composition and structure is intact and functioning within its historical range.

The *Cohesive Strategy* addresses institutional objectives and priorities, program management budgets and authorities, and social awareness and support. The strategy is based on the alignment of these institutional, program management, and constituency elements. The cohesion of this strategy stands on the collective strength of these three core elements. This report describes a cohesive set of actions from which the Forest Service may choose to initiate restoration and maintenance objectives within fire-adapted ecosystems.

1-21/left/3rd para/following
2nd sentence

Insert: The ICBEMP decision will provide long-term, broad-scale management direction to replace the interim PACFISH, INFISH, and Eastside Screens strategies, which amended Forest Service and BLM land use plans. With the exception of these interim strategies, the ICBEMP decision would not alter management direction that addresses listed species in the land use plans.

1-21/right/para under
Recovery Plans/4th sentence

Revise: The intent of the ICBEMP decision is to require actions to be ~~tiered to approved~~ **consistent with adopted** recovery plans...."

Chapter 2

Affected Environment

Chapter 2 of the Supplemental Draft EIS is incorporated by reference, in accordance with 40 CFR 1500.4(j) and (o), 1502.21 and 1506.4. The incorporated material can be found on pages 2-1 through 2-256 in Volume 1 of the Supplemental Draft EIS. The content is briefly summarized below, with changes based on public comment and internal review following the summary.

Summary

In addition to the conditions and trends summarized below, Chapter 2 discusses how information for the project was gathered and presented, positive ecological trends on Forest Service- and BLM-administered lands over the past 10 to 20 years, and basic ecosystem concepts. These concepts, such as historical range of variability, ecological processes and functions, and ecological integrity and ecosystem health, are included to help the reader better understand the rest of the chapter and the rest of the EIS. This information can be found in both the Supplemental Draft EIS and the Draft EISs.

Conditions and Trends in the Project Area

The ecological and social conditions and trends of the basin indicate a need for a new management strategy for public lands. Following is a brief overview of some of these current conditions and trends from the historical to current period.

Physical Setting

- ♦ Soil productivity across the project area is generally stable to declining. Generally, greater declines in soil productivity are associated with greater intensities of timber harvesting, roading, and grazing.
- ♦ Sustainability of soil ecosystem function and process is at risk in areas where redistribution of nutrients has resulted from changes in vegetation composition and pattern and removal of larger wood.

Basin — In this EIS, refers to the Interior Columbia Basin Ecosystem Management Project area, as defined in the *Scientific Assessment* (Quigley and Arbelbide 1997). Includes all ownerships, not just Forest Service, and BLM-administered lands.

Project Area — In this EIS, refers to Forest Service and BLM-administered lands in the Interior Columbia Basin Ecosystem Management Project area. Project area is synonymous with planning area.

Hydrology and Watershed Processes

- ♦ Management activities throughout watersheds in the project area have affected the processes of sedimentation and erosion and the production and distribution of organic material, thus affecting hydrologic conditions. On federally administered lands the most pronounced changes to watersheds are due to water diversions and impoundments, road construction, changes in vegetation due to silvicultural practices, and excessive livestock grazing.
- ♦ Stream flow regimes have been locally affected by dams, diversions, and groundwater withdrawal. More subtle but widespread changes to natural stream flows on federally administered lands have probably been caused by road construction and changes in vegetation due to silvicultural practices and excessive livestock grazing.

Air Quality

- ♦ The current condition of air quality in the project area is considered good, relative to other areas of the country.
- ♦ Current wildfires produce higher levels of smoke emissions than historically, because fuel available to be consumed by wildfire has increased.

Terrestrial (Upland) Vegetation

- ♦ Interior ponderosa pine has decreased across its range, with a significant decrease in the amount of old trees in single story structure. Western white pine and whitebark pine/alpine larch have

decreased by 95 percent across their range in the project area.

- ♦ There has been a loss of the large tree component (live and dead) within roaded and harvested areas. This loss affects terrestrial wildlife species closely associated with these old-forest structures.
- ♦ Generally, mid aged forest structures have increased in dry and moist forests, with a loss of large, scattered, shade-intolerant tree components and an increase in density of smaller diameter shade-tolerant trees.
- ♦ Noxious weeds are spreading rapidly and in some cases exponentially throughout the project area. Cheatgrass and other exotic plant infestations have simplified species composition, reduced biodiversity, changed species interactions and forage availability, and reduced the system's ability to buffer against change or act as wildlife strongholds in the face of long-term environmental variation.
- ♦ Woody species encroachment by and/or increasing density of woody species (sagebrush, juniper, ponderosa pine, lodgepole pine, Douglas-fir), especially on the dry grassland and cool shrublands, have reduced herbaceous understory (such as grasses and forbs) and biodiversity.

Terrestrial Species

- ♦ Approximately 14,000 terrestrial plant and animal species were considered in the Terrestrial Ecology Assessment, including 548 vertebrates, 715 invertebrates, and more than 12,500 plant species.
- ♦ From historical to current periods, there has been an increase in fragmentation and loss of connectivity within and between blocks of habitat, especially in lower elevation forests, shrub-steppe, and riparian areas in the basin. Fragmentation has isolated some animal and plant habitats and populations and reduced the ability of populations to disperse across the landscape, resulting in potential, long-term loss of genetic interchange.
- ♦ Declines in plants and terrestrial vertebrates are due to a number of human causes including: conversion of habitat to agriculture and urban development, grazing, timber harvest, introduction

of exotic plant and animal species, recreation, high road densities, fire exclusion, and mining.

- ♦ Biological crusts have been degraded and their development has been inhibited in some range-land cover types by recreational activities, excessive livestock grazing pressure, and exotic undesirable plant invasions. Degradation of biological crusts and inhibition of biological crust development often causes and perpetuates an increase in soil erosion.

Aquatic-Riparian-Hydrologic Component

Aquatic and Riparian Habitats

- ♦ Important aspects of stream channel stability, such as channel complexity and large wood abundance, have decreased throughout much of the project area. Aquatic species habitat features such as riffle-pool frequency and wood frequency are generally less in areas with higher road densities and in areas where timber harvest has been a management emphasis.
- ♦ The overall extent and continuity of riparian areas and wetlands has decreased, primarily because of conversion to agriculture but also because of urbanization, transportation improvements, and stream channel modifications.
- ♦ Most riparian areas on Forest Service- or BLM-administered lands are either “not meeting objectives”, “non-functioning”, or “functioning at risk.”
- ♦ Within riparian woodlands, the abundance of mid seral vegetation has increased, whereas the abundance of late and early seral structural stages has decreased, primarily because of fire exclusion and harvest of large trees.
- ♦ Within riparian shrublands, there has been extensive conversion to riparian herblands and increases in exotic grasses and forbs, both primarily because of processes and activities associated with excessive livestock grazing pressure. Finer scale information also indicates an extensive spread of western juniper into riparian shrublands.
- ♦ There is an overall decrease in large trees and late seral vegetation in many riparian areas.

Water Quality

- ♦ Management activities throughout the project area have affected water quality, which is important to aquatic habitats and riparian and wetland areas. On federally administered lands, the most pronounced changes to water quality are due to road construction, changes in vegetation (from silvicultural practices and fire exclusion), excessive livestock grazing, and water diversions and impoundments. These activities have altered the streamflow, erosion, and sedimentation regimes, as well the production and distribution of organic material.
- ♦ Within the project area, approximately eight percent of stream miles on Forest Service- and BLM-administered lands are water quality limited as defined by the Clean Water Act. On Forest Service-administered lands, the primary water quality problems are non-point sources of pollution consisting of sedimentation, turbidity, flow alteration, and high temperatures. On BLM-administered lands, water quality limited segments are listed because of non-point pollution sources consisting of high sediment, turbidity, and high temperatures.

Aquatic Species

- ♦ The composition, distribution, and status of fishes within the project area are different than they were historically. Some native fishes have been extirpated from large portions of their historical ranges.
- ♦ Many native nongame fish are vulnerable because of their restricted distribution or fragile or unique habitats.
- ♦ Although several of the key salmonids are still broadly distributed (notably the cutthroat trout and redband trout), declines in abundance, loss of life history patterns, local extinctions, and fragmentation and isolation in smaller blocks of high quality habitat are apparent.
- ♦ Wild chinook salmon and steelhead are near extinction in a major part of their remaining habitat.

Social-Economic-Tribal Component

Social and Economic Considerations

- ♦ The project area is sparsely populated and rural, especially in areas with a large amount of federal lands. Some areas are experiencing rapid population growth, especially those areas offering high quality recreation and scenery.
- ♦ Development for a growing human population is encroaching on previously undeveloped areas adjacent to lands administered by the Forest Service or BLM. Population growth and associated new development can put stress on the political and physical infrastructure of rural communities, diminish habitat for wildlife, and increase agency costs to manage fire to protect people and structures.
- ♦ Changing levels and values of commodity outputs can affect budgets of counties that have benefited from federal sharing of receipts from sales of commodities and services on BLM- and Forest Service-administered lands.
- ♦ At the local level, some communities rely on economic activity supported by timber harvest

levels, processing of forest products, livestock grazing, mining, and recreation. Forest products and AUMs no longer solely dictate the economic prosperity of the region, even though they remain economically and culturally important in rural areas. The economic dependence of communities on these industries is highest in areas that are geographically isolated and offer few alternative employment opportunities.

Federal Trust Responsibility and Tribal Rights and Interests

- ♦ The relationship that American Indians have with federal lands may be affected by proposed actions on forestlands and rangelands that change vegetation structure, composition, and density; existing roads; and watershed conditions.
- ♦ Culturally significant species such as anadromous fish and the habitat necessary to support healthy, sustainable, and harvestable aquatic and terrestrial species constitute one of the major American Indian interests potentially affected by the ICBEMP decision.

Modifications Made to ICBEMP Supplemental Draft EIS Chapter 2

Page/Column/Paragraph or
Table/Fig/Map/Photo

Change Made (bold = new; strikeout = delete)

2-20/left/1st para

Revise: This decomposition process is a critical link in the nutrient cycling process, especially for plant nutrients such as ~~carbon~~, nitrogen, potassium, and phosphorous. ~~and sulfur~~.

2-33/left/2nd para/1st sentence

Revise: The Clean Air Act, passed in ~~1955~~ **1977**...

2-34/Map 2-4

Add: a star marking Spokane county, Washington as being a PM₁₀ nonattainment area.

Landscape Dynamics Component: Terrestrial (Upland) Vegetation

2-40/left/2nd para/2nd sentence

Revise: More than ~~42,000~~ **12,500** plant species are known in the project area.

2-40/left/3rd para/2nd sentence

Revise: Approximately ~~13,000~~ **14,000** terrestrial plant and animal species...

2-40/left/3rd para/last sentence

Delete: ~~Wisdom et al. (in press) conducted an in-depth analysis of habitat requirements of 91 species that represented those 13,000 species.~~

Terrestrial Species Component

2-92/left/first bullet/last sentence

Delete: ~~The Supplemental Draft EIS focuses on 91 terrestrial species (a total of 97 "species-seasonal combinations") that are of broad-scale concern and whose habitat could be mapped reliably using available broad-scale data.~~

2-102/left/Background:
Refined Terrestrial Vertebrates
Analysis

Insert at the beginning of this section: Lehmkuhl et al. (1997) presents the background for the analysis of effects on terrestrial vertebrates in the Draft EISs. Terrestrial species in the basin were assigned to one of three groups. One is a group of species for which no further analysis was considered necessary. The second group contains species that are of concern at the local level (fine-scale). The third group is composed of species that are of regional conservation concern. The species in this third group were identified based on four criteria:

1. Habitat for the species has declined historically or might decline in the future under any of the alternatives; or
2. The species is associated with a specific habitat feature (such as snags) that has declined in the past or might decline under any of the alternatives; or
3. The species population has undergone a significant decline based either on data or expert opinion; and
4. The species is sufficiently widespread within the project area that it can be legitimately assessed at the scale of a regional plan.

Modifications Made to ICBEMP Supplemental Draft EIS Chapter 2 (Continued)

Page/Column/Paragraph or
Table/Fig/Map/Photo

Change Made (bold = new; strikeout = delete)

2-103/top of page

Insert Table 2-22a at top of page:

Table 2-22a. Number of Species Analyzed for the ICBEMP.

Taxonomic Group	Total in Basin	Analyzed in Lehmkuhl et al. 1997 ¹	Analyzed as broad-scale in Wisdom et al. (2000) ²	Classified as fine-scale in Wisdom et al. (2000) ^{2,3}
birds	362	133	52	67 (65)
mammals	132	20	32	3 (3)
reptiles	27	13	7	4 (4)
amphibians	27	7	0	9 (9)

¹ Species analyzed for Draft EISs.

² Species analyzed for Supplemental Draft EIS.

³ Number of riparian/wetland species in parentheses.

2-105/right/2nd para/2nd sentence

Revise: ...lands have decreased from "A" to "D" for pygmy nuthatch and from ~~"A" to "E"~~ **"B" to "E"** for Lewis' woodpecker (see Table 2-23a).

2-105/right/2nd full para/
2nd sentence

Insert after 2nd sentence: (See the Effects of the Alternatives on Terrestrial Vertebrates section in Chapter 4 for a discussion of the various outcome levels.)

2-107/Table 2-23a

Add footnote: See the Effects of the Alternatives on Terrestrial Vertebrates section in Chapter 4 for a discussion of the various outcome levels.

2-107/Table 2-23a/Column 2

Revise: for Lewis' woodpecker (migrant), Predicted Environmental Outcomes-FS/BLM lands, Historical: ~~A~~ **B**

2-107/Table 2-23a/Column 4

Revise: for Lewis' woodpecker (migrant), Predicted Population Outcomes—Cumulative, All lands, Historical: ~~A~~ **B**

2-113/left/2nd full para/
Terrestrial Family 12/
last sentence

Revise: Increasing forest encroachment adversely affects the Idaho ground squirrel, **grasshopper sparrow, and to a lesser degree Columbian sharp-tailed grouse.**

2-115/Map 2-11b

Revise: Map 2-11b, Carnivore Habitat with Low Road Density now shows all of Areas 1, 3, and 7, including the portions outside the project area. (The revised map follows at the end of this chapter.)

2-117/right/4th para

Not all ~~federal candidate~~ or agency sensitive species are necessarily in decline; ...

Page/Column/Paragraph or
Table/Fig/Map/Photo

Change Made (bold = new; strikeout = delete)

2-118/right/2 nd para/1 st sentence	Revise: Gray wolves are known to occur in Idaho, and Montana, Washington, and Oregon.
2-118/right/2 nd para/2 nd sentence	Revise: ... and Washington, however the U.S. Fish and Wildlife Service has recently proposed to change this classification to threatened.
2-119/Table 2-24	Revise: Lynx — PF to T Revise: Northern Idaho ground squirrel — PF to T Revise: Spalding's catchfly — PE to PT Revise: Showy stickseed — E to PE Add: Coastal cutthroat trout <i>Oncorhynchus clarki clarki</i> Add: Columbia river chum salmon <i>Oncorhynchus keta</i> Revise: Source: U.S. Fish and Wildlife Service (July 15, 1999), <i>Federal Register</i> 48/28/99 12/22/99 and 10/25/99
2-120/left/1 st para/last sentence	Delete last sentence and replace with: The U.S. Fish and Wildlife Service has completed a Final EIS related to reintroduction of grizzly bears in the Bitterroot recovery area, and has issued a decision to reintroduce grizzly bears into the Bitterroot recovery area as an experimental, non-essential population.
2-120/right/1 st para/1 st sentence	Delete: In 1998, the U.S. Fish and Wildlife Service proposed to list the lynx as threatened. Insert: In 2000, the U.S. Fish and Wildlife Service listed the lynx as a threatened species.
2-120/right/1 st para/3 rd sentence	Delete: A decision on listing is anticipated in January 2000.
2-120/right/1 st para/4 th sentence	Revise: has also been proposed for listing was listed as threatened in April 2000.
2-120/right/1 st para /last sentence	Insert: The showy stickseed, found in one to four localized populations in central Washington has been proposed for listing as endangered.
2-120/right/2 nd para	Delete: showy stickseed (central Washington)

Aquatic-Riparian-Hydrologic Component

2-132/right/pull quote and 2 nd full para	Revise: The BLM estimates that 66% of BLM-administered riparian areas in the western United States are either "non-functioning" or "functioning at risk"...
2-140/right/1 st full para/1 st sentence	Revise: Sixteen Seventeen fish species or species stocks in the project area are formally listed under the Endangered species Act, one is proposed for listing as threatened (coastal cutthroat trout) , and one qualifies for listing (candidate species: coho salmon).
2-140/right/1 st full para/3 rd sentence	Revise: Nine species or species stocks are listed... Warner sucker, and Lahontan cutthroat trout, and chum salmon (Columbia River).
2-140/right/1 st full para	Add the following as last sentence: There is only a very small overlap in potential distribution of Columbia chum salmon and coastal cutthroat trout with the ICBEMP project area. The overlap is limited to isolated parcels of BLM-administered lands.
2-148/right/1 st para/last sentence	Revise: Current and historical distributions of Yellowstone cutthroat trout within the project area are illustrated on Map 2-17.

Modifications Made to ICBEMP Supplemental Draft EIS Chapter 2 (Continued)

Page/Column/Paragraph or Table/Fig/Map/Photo	Change Made (bold = new; strikeout = delete)
2-149/left/3 rd para/4 th sentence	<i>Revise:</i> Westslope cutthroat have been petitioned for listing under the Endangered Species Act and is currently under status review by the U.S. Fish and Wildlife Service. Westslope cutthroat trout were petitioned for listing under the Endangered Species Act; in spring 2000 the U.S. Fish and Wildlife Service determined that the species condition does not warrant listing as threatened or endangered.
2-152/left/5 th full para/last sentence	<i>Revise:</i> The Great Basin resident interior population has been petitioned for listing under the Endangered Species Act and is currently under status review by the U.S. Fish and Wildlife Service. The Great Basin resident-interior population was petitioned for listing under the Endangered Species Act; in spring 2000 the U.S. Fish and Wildlife Service determined that the species condition does not warrant listing as threatened or endangered.
Social-Economic-Tribal Component	
2-165/Key Terms	<i>Insert:</i> Natural Areas—Areas that are managed by various federal agencies for a variety of purposes but that are maintained in a relatively natural state, with minimal human disturbance. Natural areas are designated for purposes of recreation, research, monitoring, inventory, habitat protection, education or scenic quality.
2-169/Map 2-24	<i>Revise:</i> Map title: Counties and BEA Economic Subregions
2-171/Map 2-25	<i>Add:</i> Source: Johnson and Beale (1995) under Recreation and Metropolitan Counties
2-175	<i>Add pull quote:</i> More extensive discussions on recreation and scenery can be found in the Draft EISs (1997).
2-178/left/2 nd full para/2 nd sentence	<i>Revise:</i> ...is important to meet the growing regional and national demand for this type...
2-178/right	<i>Insert the following new section after the Scenery section:</i> Natural Areas Approximately 12.5 million acres of natural areas are distributed throughout the project area (see Map 2-28a). They include designated wilderness areas, wilderness study areas, research natural areas, areas of critical environmental concern, botanical areas, and other similar areas. They can occur in all categories of land allocations and can vary in management objectives and allowed uses. Natural areas can provide unique recreational, scenic, and cultural opportunities; science learning opportunities; and environments that are important for conserving native plant or animal species and ecological functions and processes.

Page/Column/Paragraph or
Table/Fig/Map/Photo

Change Made (bold = new; strikeout = delete)

The *Scientific Assessment* found that approximately 25 to 28 percent of BLM and Forest Service administered lands in the project area are within some type of natural area designation or category (Hann et al. 1997c, Marcot et al. 1997).

Natural area management is both a science and a social issue. Marcot et al. (1997) and Greene et al. (1997) identified the role that designated natural areas play in the basin, including providing for representation of native species and habitats; and as centers of species rarity, endemism, and biodiversity. They found that while there are some large natural areas (such as wilderness areas), most designated natural areas are small, occur in high upper elevations, and do not fully represent all native vegetation communities.

The other aspect of natural areas deals with people's perceptions of what is natural, and people's use of and expectations for these natural landscapes. Society values areas that are perceived as being "unroaded". In the Economics chapter (Haynes and Home 1997) of the *Assessment of Ecosystem Components*, these existence values were used as a proxy to measure ecosystem condition in the sense of maintaining options for future generations.

2-179/Map 2-28a

Insert: New map (**Map 2-28a**) of Natural Areas. The new map follows at the end of this chapter.

2-183/right/2nd full para/
1st sentence

Revise: During the 1990s, there has been a... but with some contribution for softening **export** demand for timber...

2-189/left/top para/1st full sentence

Revise: A complete accounting of economic benefits would include **values held by local and regional residents, as well as** value obtained by people who may not ever visit the project area...

2-193/right/3rd full para/1st sentence

Revise: an estimated 77,000 **direct** jobs...

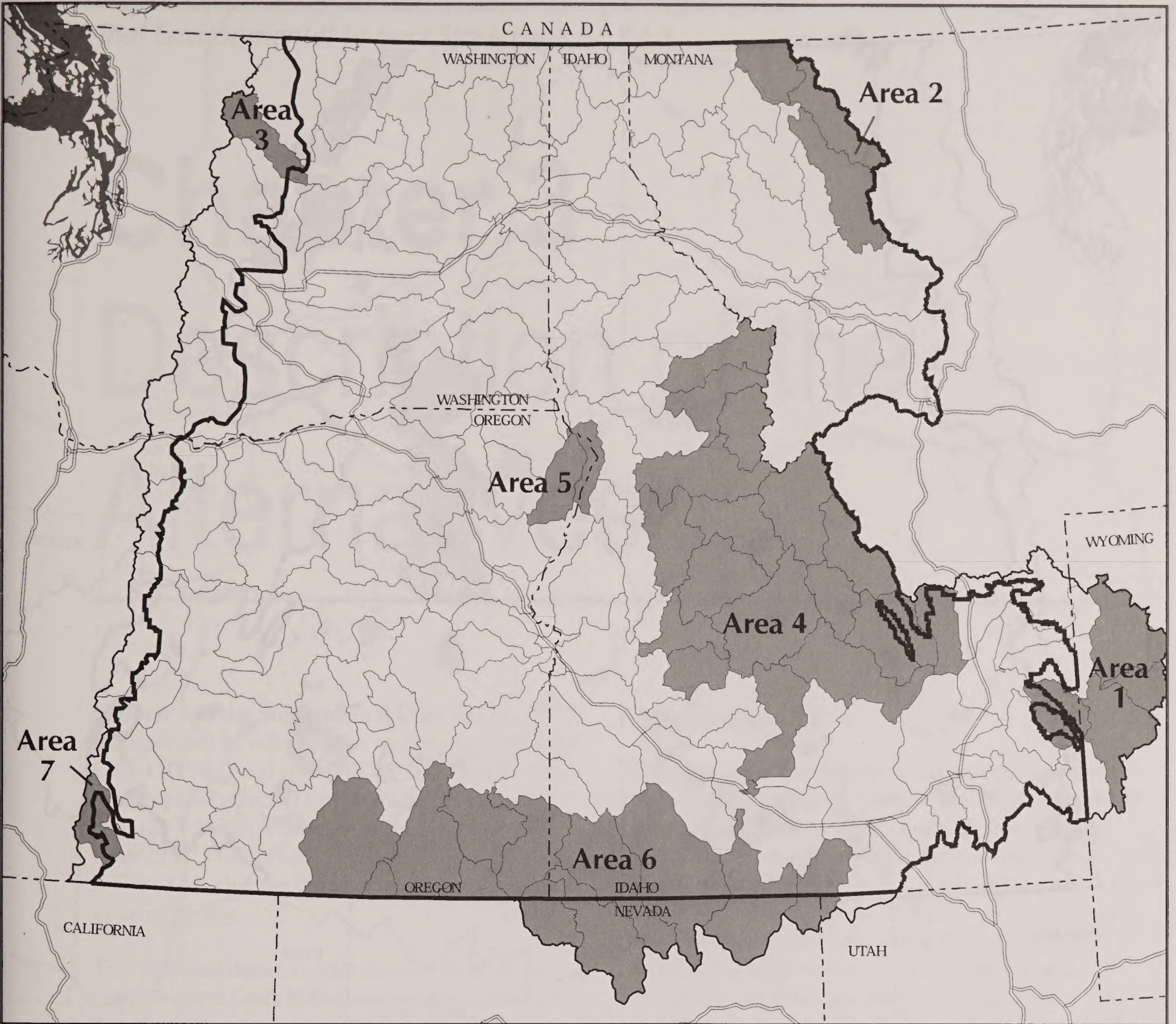
2-193/right/last para

Delete: ~~A regional economic study conducted by the Forest Service in the central Rocky Mountains recognized the export nature of some tourist-related service industries. The effect of these service/tourist industries on the local economy was found to be similar to the earnings returned to a local firm from the export of physical commodities (DeVilbiss 1992).~~

Add: remaining sentence to previous paragraph

Modifications Made to ICBEMP Supplemental Draft EIS
Chapter 2 (Continued)





Page/Column/Paragraph or Table/Fig/Map/Photo	Change Made (bold = new; strikeout = delete)
2-223	<p><i>Insert sidebar before Overview of Fire Suppression Influence:</i></p> <div><p>Effects of the Year 2000 Wildfires on the Interior Columbia River Basin</p><p>In the summer of 2000, nearly 7,000 wildfires started from lightning or human activities within the project area. Most (96 percent) were controlled before they could grow to a significant size. However, the ones that escaped initial suppression efforts covered almost 3 million acres before they were stopped. The result is that the year 2000 will be remembered as one of the most serious fire seasons in the past 100 years. To fully evaluate and understand the effects of these fires at a fine scale will take years. However, at the basin-scale, while the size and severity of some of these fires were outside the historical range of variability, the conditions and effects were within the range predicted in the Supplemental Draft EIS. In fact, the present and future risk of uncharacteristically large and severe fires is well documented in the EIS.</p><p>To understand the significance of these fires, it is helpful to consider both the historical and the ecological context in which these fires occurred. Many factors combined to create the conditions that led to the unusually high number and size of wildfires as well as some uncharacteristic fire severity: (1) Fuel loads resulting from decades of wildfire suppression provided the contiguous combustible material necessary for wildfire ignition and spread. (2) Drought reduced the fuel moisture to extremely low levels and put the trees and other vegetation in a moisture stress condition and making them extremely flammable. (3) The mid to late summer weather in the basin was ideal for wildfire with several lightning and wind events, very little rainfall, hot temperatures, and low humidity. (4) As a result of the extraordinary number of large fires and limited suppression resources nation-wide, fire managers were forced to prioritize their resources.</p><p>Over 2,000,000 acres of the area burned is on lands administered by the BLM or the Forest Service. This area includes all moisture regimes and a wide spectrum of habitats. According to the Science Advisory Group (Hemstrom et al. 2000), the amount of burned area is roughly 1.5 times the average annual area predicted to burn from wildfire over the next 100 years under Alternative S1 (continuation of current management). Therefore, the actual burned acres are well within the long-term expected range of wildfire acreage.</p><p>As the ICBEMP is implemented, the cumulative effects of the summer 2000 fires and other past and future fires will be calculated and the risks to the burned areas will be analyzed through the step-down process. The information produced will help the BLM, Forest Service, and their partners better manage landscapes where fire is an inevitable and dominant force of nature.</p></div>



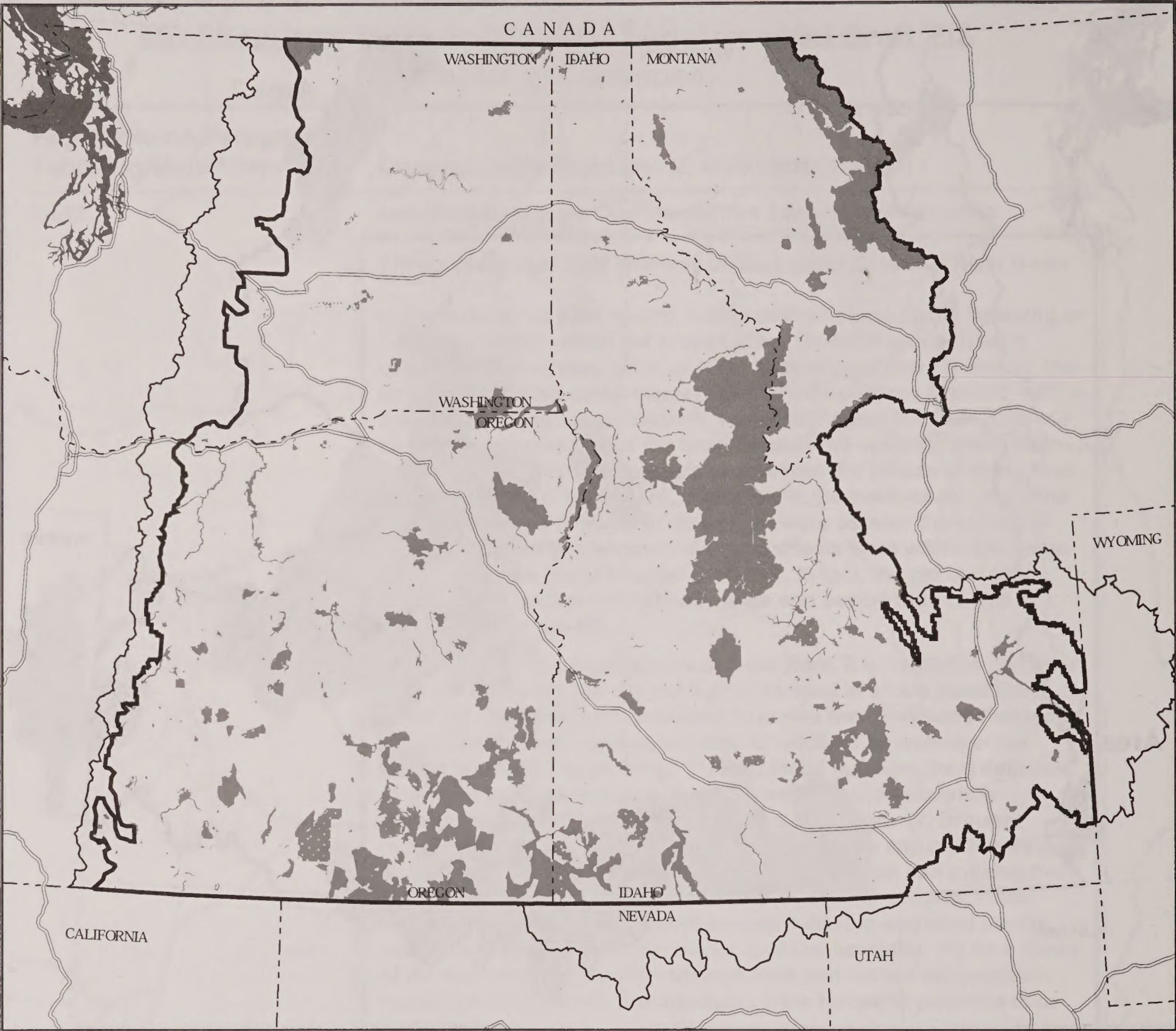
**Map 2-11b.
Carnivore Habitat
with Low Road Density**

INTERIOR COLUMBIA
BASIN ECOSYSTEM
MANAGEMENT PROJECT

Final EIS
2000

-  Overlap of moderate to high carnivore habitat abundance with zero to low road density
-  Subbasin Borders
-  Major Roads
-  Planning Area Border

- Area 1** - Greater Yellowstone Area
- Area 2** - Northern Continental Divide Area
- Area 3** - North Cascades Area
- Area 4** - Bitterroot-Central Idaho Area
- Area 5** - Eagle Cap Wilderness-Hells Canyon Area
- Area 6** - Owyhee Area
- Area 7** - Crater Lake Area



**Map 2-28a.
Natural Areas**

INTERIOR COLUMBIA
BASIN ECOSYSTEM
MANAGEMENT PROJECT

Final EIS
2000

■ Natural Areas ≡ Major Roads
≡ Planning Area Border

Chapter 3

Description of the Alternatives

Chapter 3 of the Supplemental Draft EIS is incorporated by reference, in accordance with 40 CFR 1500.4(j) and (o), 1502.21 and 1506.4. The incorporated material can be found on pages 3-1 through 3-138 in Volume 1 of the Supplemental Draft EIS. The content is briefly summarized below, followed by changes based on public comment and internal review.

The proposed decision (Alternative S2 from the Supplemental Draft EIS as amended by public comments and internal review) is displayed in its entirety in a separate document, the *Interior Columbia Basin Final Environmental Impact Statement: Proposed Decision*. That document incorporates all the changes displayed in this chapter for Alternative S2 along with additional minor editorial corrections.

Summary

Description of Alternatives

There are three alternative management strategies analyzed in the Supplemental Draft EIS: Alternative S1, Alternative S2, and Alternative S3.

Alternative S1

Alternative S1 (no action) continues management specified under each existing Forest Service and BLM land use plan, as amended or modified by interim direction—known as Eastside Screens (national forests in eastern Oregon and Washington only), PACFISH, and INFISH—as the long-term strategy for lands managed by the Forest Service or BLM. The final standards for rangeland health and guidelines for livestock grazing management (Healthy Rangelands) currently being implemented on BLM-administered lands in Idaho, Montana, Oregon, and Washington are continued on the same lands. The reasonable and prudent measures, terms and conditions, and/or conservation recommendations from the Biological Opinions on the Forest Service Land and Resource Management Plans as amended by PACFISH and INFISH are maintained and followed where applicable.

Forest Service- and BLM-administered lands would continue to be managed by direction in individual existing land use plans, recovery plans, and other current direction. Many of the plans were based on the assumption that ecological conditions were healthy, or that disturbances (such as fire, insects,

and disease) would not substantially affect planned actions, desired outcomes, or outputs. In general, the intent is to provide sustainable levels of resources (such as timber and wood products, livestock forage, big game and game birds, and minerals) in an environmentally prudent manner from some areas. Other areas are managed as wilderness or wilderness study areas, scenic areas, research natural areas, unroaded lands, and conservation areas to provide other uses and values such as aesthetics, recreation opportunities, viewable wildlife, and clean air and water.

Design and Architecture of Alternative S1

Alternative S1, the no-action alternative, represents all the various land use plans in the project area. These plans were developed at different times by two agencies in several regions using different definitions and policies. The plans vary tremendously. Each plan was written at a much smaller scale than the ICBEMP, and each was developed using different goals than the ICBEMP. An attempt was made to make Alternative S1 parallel to the other alternatives; however, it is described and presented somewhat differently than Alternatives S2 and S3. For example, Alternative S1 is organized by the four major components, just as Alternatives S2 and S3 are (landscape succession/disturbance; terrestrial species habitat; aquatic habitat; and human needs, products, and services). However, it does not have a comprehensive restoration strategy, and there are no aquatic (A1 and A2 subwatersheds) or terrestrial (T watersheds) habitats delineated. Therefore, since it was neither appropriate nor possible to include all direction from individual plans, relevant items were consolidated and paraphrased.

Management Direction

Forestland Vegetation Management

The general intent of forestland vegetation management is to rely on even-aged management practices, favor shade-intolerant species with reduced stand densities, improve growth and yields, restore and maintain soil productivity, use genetically improved trees to prompt reforestation, and reduce fuel loads. In the past, lands suitable for timber production were managed at the stand level; however, policy changes, interim strategies, and Biological Opinions have affected forestland management so management activities are planned at watershed scales more than at the stand level, uneven-aged practices are empha-

sized more, and timber harvest is reduced within riparian areas and priority watersheds.

Rangeland Vegetation Management

The intent of vegetation management on rangelands is focused on providing forage for livestock and wildlife, while protecting soil productivity and coordinating with other resource uses. Control and prevention of noxious weeds and management of non-native plants is gaining importance as a management intent. Healthy Rangelands direction for BLM-administered lands, interim strategies, and Biological Opinions have increased the focus on vegetation and soil conditions and protection of aquatic and riparian values.

Wildlife Habitat Management

The intent of wildlife habitat management is to develop effective wildlife habitat (primarily big game and other game animal habitat) by managing vegetation and road access. Certain key habitats and habitat components, such as late/old growth forests and snags and downed wood, are generally planned to exist at relatively low levels—often the minimum required to maintain species viability, although the importance of these habitat components has been enhanced in eastern Oregon and eastern Washington forests because of the Eastside Screens.

Aquatic/Riparian Management

Each land use plan generally has direction for aquatic and riparian management. The intent of managing aquatic/riparian resources has been modified by requirements in PACFISH, INFISH, and the Biological Opinions, which provide a consistent approach to aquatic habitat management for most of the project area. The requirements include:

- ♦ Establishing Riparian Habitat Conservation Areas and Riparian Management Objectives;
- ♦ Incorporating standards and guidelines for resource management applied to riparian conservation areas and upland areas affecting riparian areas;
- ♦ Designating priority watersheds and specific subbasins for protection/restoration activities;
- ♦ Using subbasin analyses and Ecosystem Analysis at the Watershed Scale;

- ♦ Focusing watershed restoration on degraded habitats to improve long-term conditions; and
- ♦ Applying terms, conditions, and conservation recommendations to watersheds with listed aquatic species habitats, priority watersheds, or specific subbasins.

Restoration

Restoration of vegetation and succession/disturbance regimes usually are not a priority in existing land use plans. In general, restoration activities such as thinning, prescribed fire, decreased road densities, and watershed restoration occur at relatively low levels. Restoration priorities are set locally, not regionally. The interim strategies and Biological Opinions have increased the focus on restoration of aquatic and riparian resources, and of forest vegetation in eastern Oregon and eastern Washington forests. They have also increased the emphasis on prioritizing restoration beyond the bounds of individual administrative units.

Alternatives S2 and S3

Alternative S2 focuses on restoring and maintaining ecosystems across the project area and providing for the social and economic needs of people, while reducing short- and long-term risks to natural resources from human and natural disturbances.

Alternative S3 focuses on restoring and maintaining ecosystems across the project area and providing for the social and economic needs of people, while being mindful of short-term risks to natural resources from human disturbances and reducing long-term risks to natural resources from natural disturbances.

In **Alternative S2** there is an emphasis on conducting analyses, such as Subbasin Review and Ecosystem Analysis at the Watershed Scale (EAWS), prior to conducting management activities. This is intended to minimize short-term risk from management activities in areas where short-term risks are of most concern, and to ensure actions occur in the most appropriate locations in the most appropriate sequence. In this way, Alternative S2 systematically minimizes short-term risks from management activities or disturbance events. Economic participation of the local workforce in management activities is promoted by ensuring restoration activities are

prioritized to occur in areas that are economically specialized in industries tied to goods and services from Forest Service- and BLM-administered lands.

In **Alternative S3**, minor emphasis is put on conducting Subbasin Review and Ecosystem Analysis at the Watershed Scale (EAWS) prior to conducting management activities. Management activities are linked to areas where they can benefit isolated communities that are economically specialized in industries tied to goods and services from Forest Service- and BLM-administered lands.

Under both Alternatives, restoration activities are planned and conducted across the project area to effectively and efficiently address the long-term risks associated with disturbance events. Restoration in certain areas is prioritized based on: areas that have high risk to terrestrial and aquatic habitats of unnaturally severe disturbance and high or moderate opportunity to address those risks (for example through the ability to connect and expand scarce aquatic and terrestrial habitats; see Map 3-8 in the Final EIS and 3-9 in the Supplemental Draft EIS). In addition, some of these areas are near isolated and economically specialized communities, and therefore have opportunity to provide economic value to human communities.

In addition to promoting the broad-scale restoration and maintenance of ecosystems, conservative direction is also provided to further promote the protection of specific watersheds containing important terrestrial wildlife source habitats (see Map 3-10 in the Supplemental Draft EIS) and specific subwatersheds containing important fish populations (see Maps 3-11 and 3-12 in the Supplemental Draft EIS). These are the habitats that have declined the most (in geographic extent) from historical to current periods, and therefore, they are in short supply. Management is designed to conserve these habitats by avoiding short-term risks to them, while expanding them elsewhere through restoration actions.

Design/Architecture of Alternatives S2 and S3

Management direction in Alternatives S2 and S3 is hierarchical in that some types of direction take precedence over others. ICBEMP direction may be basin-wide (applies to all Forest Service- and

BLM-administered lands in the project area), geographic (applies to certain mapped or described areas), or conditional (applies wherever particular conditions are found).

The design or architecture of Alternatives S2 and S3 include four main elements:

- ♦ *Integrated management direction* includes base level, restoration, and geographically specific direction, which addresses landscape dynamics, terrestrial source habitats, aquatic species and riparian and hydrologic processes; and social-economics and tribal governments;
- ♦ *A step-down process* to bring broad-scale management direction and scientific findings to national forests and BLM districts;
- ♦ *Adaptive management*, which allows modification of management direction to incorporate new knowledge and understandings; and
- ♦ *Monitoring and evaluation* to ensure management activities are achieving desired results.

Integrated Management Direction

The management direction in Alternatives S2 and S3 is designed to address four major broad-scale ecosystem components: landscape dynamics; terrestrial source habitats; aquatic species and riparian and hydrologic processes; and social-economic-tribal considerations. The direction is organized to integrate the interconnections among these components. The intent of the management direction—which includes objectives, standards, and guidelines—is summarized below. Where differences exist between the two action alternatives, those differences are discussed.

Landscape Dynamics

The landscape dynamics component of the integrated ecosystem management strategy was developed to maintain ecosystems that are in good condition, and to restore ecosystems that are degraded on Forest Service- and BLM-administered lands. The intent of management direction for **landscape dynamics** is to maintain or, if necessary, restore the health, productivity, and diversity of native fish, wildlife, and plants; maintain or improve water quality; sustain stream flows; and maintain and/or enhance the resiliency of forests and rangelands to fires, disease, and other disturbances. This direction provides the

foundation for managing long-term risk to fish, wildlife, and plant species and habitats, and social-economic needs (including tribal rights and interests). It provides the thread that connects and integrates the individual components. Management direction for landscape dynamics can be found in the base level, restoration, and terrestrial T watershed sections; however, direction for aquatic A1 and A2 subwatersheds also contributes to the maintenance and restoration of landscape dynamics.

One intent of managing native plant communities is to slow the rapid spread of **noxious weeds** using an integrated weed management strategy. Another intent is to protect and enhance vegetation types that are in short supply and are important to wildlife, such as **old forests**.

Management direction for fire and roads is included as part of landscape dynamics. The intent of direction for **fire management** is to improve vegetation conditions and reduce the threat of severe wildfire through the use of prescribed fire. Coordinating fire management with adjacent landowners is intended to increase the resiliency of forests and rangelands to severe wildfires while also reducing the negative air quality impacts that are associated with severe wildfires.

The overarching intent for **roads management** within the ICBEMP is to progress toward a smaller transportation system that provides public access, reduces road-related adverse effects, and can be maintained in the long term with minimal environmental impact. Roads that are no longer needed will be closed or obliterated and ecological values restored. Roads that are needed for land management, public access, and tribal rights are intended to be safe, promote efficient travel, and be improved as needed. New road construction will be reduced from past levels. The focus of road restoration is intended to occur where reduction of adverse effects and benefits to resources can be maximized—for example, along valley bottoms and main river corridors where species are negatively affected by human disturbance and habitat degradation associated with roads.

When comparing landscape dynamics management direction under Alternatives S2 and S3, **Alternative S3** places a greater emphasis on conducting more immediate actions to address long-term risks to resources from unnaturally severe disturbance.

Terrestrial Source Habitat

The terrestrial component of the integrated ecosystem management strategy was developed to consider and provide habitat for productive and diverse populations and communities of plant and animal species; provide habitat capable of supporting harvestable resources; and provide for terrestrial habitats on Forest Service- and BLM-administered lands. The focus of the **terrestrial source habitat** direction is to change declining trends in terrestrial habitats by maintaining important vegetation characteristics (such as plant species composition, forest and rangeland vegetation structure, snags, and coarse woody debris) which various terrestrial species need to survive and reproduce. Management direction for terrestrial source habitat can be found in the base level, restoration, and terrestrial T watersheds sections.

Terrestrial T watersheds (see Map 3-10) were identified because they contain source habitat for one or more of five "Families" of terrestrial species. Terrestrial species in these Families in general represent those for which source habitats have declined the most from historical to current periods in the project area. In addition, the pattern of source habitats within these watersheds is most similar to that historically found. Terrestrial T watersheds are an important, but not the only, component of the terrestrial habitat strategy. In the short term, the intent of managing source habitats, especially in T watersheds, is to conserve habitats with old-forest characteristics and those that have shown the greatest decline in geographic extent from what they were historically and therefore are in short supply. In the long term, the overall intent is to increase the geographic extent and connectivity of these same habitats, and to have a sustainable mix and pattern of habitats, which should contribute to the long-term persistence of terrestrial species.

Aquatic Species and Riparian and Hydrologic Processes

The aquatic/riparian/hydrologic component of the integrated ecosystem management strategy was developed to maintain and restore the health of watersheds and aquatic ecosystems on Forest Service- and BLM-administered lands. It focuses on maintaining and restoring watershed conditions, water

quality, and aquatic and riparian habitat by replacing interim strategies (PACFISH and INFISH), and addressing long-term aquatic species viability, short- and long-term risks to these resources from management activities, and long-term risks from uncharacteristically severe natural disturbances. Geographically specific areas, such as riparian conservation areas (RCAs), aquatic A1 subwatersheds, and aquatic A2 subwatersheds, (see Maps 3-11 and 3-12) are important components of the aquatic strategy. Management direction for aquatic/riparian/hydrologic resources can be found in the base level, restoration, and aquatic A1 and A2 subwatersheds sections. In addition, management direction for landscape dynamics and terrestrial source habitats is intended to enhance aquatic/riparian/hydrologic resources.

RCAs, A1 subwatersheds, and A2 subwatersheds were identified because of their importance to fish, riparian-dependent species, water quality, and other aquatic, riparian, or hydrologic resources. The management intent in these areas is to protect these resources in the short term and improve them in the long term. Protection and enhancement of these areas are intended to contribute to a network of connected aquatic/riparian habitats and enhance the long-term persistence of aquatic and riparian-dependent species.

When comparing aquatic management direction in Alternatives S2 and S3, **Alternative S3** has fewer acres that are delineated as aquatic A1 and A2 subwatersheds and riparian conservation areas (RCAs).

Socio-economic and Tribal Considerations

The social-economic-tribal component of the integrated ecosystem management strategy was developed to support the economic and social needs of people, cultures, and communities of the interior Columbia Basin, and to provide for sustainable levels of **products and services** from lands administered by the Forest Service and BLM within the capabilities of the ecosystem. It focuses on producing products and services from public lands to encourage and support people's use of public land resources within the capacity of ecosystems to provide sustainable levels of products and services, consistent with other ecological and restoration goals. Another intent is to support **economic activity** for local and tribal communities, particularly those that are isolated and economically specialized, which will help maintain

their viability as they move toward achieving their long-range goals of economic development and broader economic diversification. Management direction that specifically addresses this component can be found in base level and restoration sections.

The socio-economic and tribal direction promotes agency support for, and collaboration with, local communities and tribal governments when developing methods to support their **social and economic needs**. Another intent is to integrate the needs of local and tribal communities more thoroughly into agency decision-making and management activities.

The **social-economic-tribal** restoration direction highlights areas where restoration activities have a direct influence on human community economic, social, and cultural needs. This direction is linked to restoration direction provided in the landscape dynamics, terrestrial, and aquatic/riparian/hydrologic sections; it relates to considerations for designing and implementing restoration activities that are intended to promote workforce participation, serve demands for commodity products at various levels, encourage intergovernmental collaboration, and consider tribal needs and interests.

The intent of management direction for **federal trust responsibility and tribal rights and interests** is to address as fully as possible tribal concerns and interests and to reflect consideration of federal legal responsibilities both to tribes and American Indian people as expressed through treaty language, federal laws, executive orders, and federal court judgements.

When comparing socio-economic management direction in Alternatives S2 and S3, **Alternative S3** promotes the economic participation of the local workforce in management activities by prioritizing more restoration areas near communities that are less economically diverse, more economically specialized, and near tribal communities.

Step-down

Step-down is the process of applying broad-scale ICBEMP science findings and management direction to site-specific activities on national forests and BLM districts.

Four levels of analysis make up this step-down process:

- ♦ Subregional analysis (BLM resource management plans or Forest Service land and resource management plans);
- ♦ Mid-scale analysis (Subbasin Review);
- ♦ Fine-scale analysis (Ecosystem Analysis at the Watershed Scale);
- ♦ Site-specific NEPA analysis (environmental analysis or environmental impact statement).

The Supplemental Draft EIS proposes direction for mid-scale analysis (Subbasin Review) and fine-scale analysis (Ecosystem Analysis at the Watershed Scale). Forest Service and BLM direction already exist for the development of resource management plans and site-specific NEPA analysis.

The intent of conducting these analyses in this step-down manner is to reduce overall short-term and long-term risks to resources from human and natural disturbances, while maximizing conservation and restoration opportunities. For example, broad-scale or regional resource risks are addressed through the Supplemental Draft EIS, subregional resource risks are addressed through land use plans, mid-scale or landscape resource risks are addressed through Subbasin Review and/or EAWS, and site-specific resource risks are addressed through site-specific NEPA analysis.

Alternative S2 places greater emphasis on conducting analyses (Subbasin Review and EAWS) than does Alternative S1 or S3 prior to conducting management activities in certain areas, which is intended to minimize the short-term risks posed by the activities and to assist in determining the most appropriate location and sequence of activities. In **Alternative S3**, there is less of an emphasis to complete EAWS prior to conducting management activities. Instead, while Alternative S2 has “triggers” for requiring EAWS, Alternative S3 uses the Subbasin Review process to identify, prioritize, and schedule EAWS and any other analyses.

Adaptive Management

The intent of adaptive management is to incorporate and build on current knowledge, observation, experimentation, and experience to adjust management methods and policies, and to accelerate learning.

The intent is for management direction to be modified if a site-specific situation is different than what was assumed during ICBEMP planning; if a flood, fire, or other event changes the characteristics of the environment; if new information gathered through monitoring indicates objectives are not being met; or if new science information indicates a need for change. Changes to management direction will be made consistent with the requirements of NFMA, FLPMA, NEPA, and their implementing regulations. Accelerated learning is intended to occur from formal research designed to test hypotheses of scientifically uncertain and/or controversial management issues, or to use field trials to test the usefulness of new strategies to achieve objectives.

Monitoring and Evaluation

Monitoring and evaluation are an integral part of adaptive management and are key to achieving the short- and long-term goals and objectives of the

ICBEMP. Success in meeting ICBEMP goals and objectives requires that the effects of this outcome-based direction be monitored and evaluated in a timely manner to determine if modifications are needed.

The monitoring and evaluation process is intended to:

- ♦ Focus on ICBEMP goals and objectives to guide key elements to monitor;
- ♦ Be developed collaboratively using an intergovernmental, interdisciplinary team;
- ♦ Address linkages and relationships among scales in the project area;
- ♦ Be based on scientific understandings of interactions among ecosystem components and human activities; and
- ♦ Be technically feasible, affordable, and operationally attainable.

Outcome-based versus Activity-based Management

Outcome-based management direction, such as that described in the Final EIS, relies largely upon describing the desired result of management, as well as the management actions or processes that are expected to achieve that result. It is appropriate at the broad scale (for example, the interior Columbia River Basin) and gives more discretion to local managers to analyze local conditions and determine what specific management activities are needed to achieve desired outcomes.

Activity-based management direction relies more upon describing specific actions/activities that must be taken or that are prohibited. It is more appropriate at the fine scale (a national forest or BLM District) where resource conditions are less diverse and results of a given action are more predictable compared to conditions and results across the basin.

Modifications Made to ICBEMP Supplemental Draft EIS Chapter 3

Page/Column/Paragraph or Table/Fig/Map/Photo	Change Made (bold = new; strikeout = delete)
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The following table includes substantive changes and many editorial changes. The proposed decision document includes additional minor editorial changes that are not reflected within this table.

3-2/Key Terms/right/ 'Guideline'	Revise 2nd sentence of 'Guideline' definition: ... EIS and ROD to further explain the EIS Team's intent in how provide suggested techniques ...to meet the objectives.
3-2/Key Terms/right/ 'Objective'	Delete 2nd paragraph of 'Objective' definition and replace with: Actions taken after the ICBEMP ROD is signed must be consistent with the objectives. However, ICBEMP objectives are broad scale; therefore, it is neither expected nor appropriate to achieve each objective to the same degree on every acre of Forest Service- or BLM-administered land in the project area. Also, since objectives focus on conditions and processes, it is possible that specific authorized activities may not individually meet each objective. However, in the long-term (more than 10 years) management actions must move broad- scale resource conditions toward the desired conditions described in the objectives. If actions are moving toward a different condition than is described by the goals or objectives then the agencies are not in compliance with the ROD.
Introduction	
3-10/right/1 st full para	Revise 1st sentence: In Alternative S2, there is greater emphasis on conducting analyses (Subbasin Review and EAWS) Alternative S2 places greater emphasis on conducting analyses (Subbasin Review and EAWS) than does Alternative S1 or S3 prior to conducting management activities...
3-10/right/Adaptive Management	Insert before last sentence of Adaptive Management paragraph: Changes to management direction will be made consistent with the requirements of NFMA, FLPMA, NEPA, and their implementing regulations.
3-11/left/1 st para	Revise 1st sentence: Alternative S3 focuses on restoring and maintaining ecosystems across the project area and providing for the social and economic needs of people, while reducing being mindful of short-term risks to natural resources from human disturbances and reducing long-term risks to natural resources from human and natural disturbances.
3-12/left/2 nd para	Revise 2nd sentence: Instead, the intent is to prioritize and schedule EAWS and any other necessary analysis during Subbasin Review. Instead, while Alternative S2 has 'triggers' for requiring EAWS, Alternative S3 uses the Subbasin Review process to identify, prioritize, and schedule EAWS and any other analyses.

Key Features that Differ from Draft EIS Alternatives 3–7

3-39/right/after 4 th bullet	Add the following bullet: ♦ The outcomes projected in the effects analysis in Chapter 4 are a reflection of budget allocations consistent with the priorities
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Table/Fig/Map/Photo

Change Made (bold = new; strikeout = delete)

highlighted in the management direction of the EIS. The available budgets associated with programs within the basin that are directed by this decision are to be allocated to the highest identified priorities, irrespective of administrative (either Forest Service or BLM, Region or State, Forest or District) boundaries and are focused on ecosystem conditions and desired change in or maintenance of those conditions. Thus the intent of the Forest Service and BLM managers is to formulate and distribute budgets to the priority areas, within the constraints of law and national direction. The priority allocation of budget applies to applicable funding, not just new funding that might be made available to implement the EIS or special restoration funding provided through special initiatives. It is recognized that this is fundamentally different than budget allocations that have occurred historically within the basin.

Hierarchy of Management Direction

3-40/right/1st partial para

Revise last sentence: Management direction for riparian conservation areas and threatened, endangered, or proposed species also falls into this category.

3-40/right

Add as new heading and paragraph after Geographically Specific Areas section:

Threatened and Endangered Species Direction

The intent of threatened and endangered species direction is to protect and restore habitats for listed or proposed species and to contribute to recovery. Since a large portion of the project area is occupied by listed or proposed species or is designated critical habitat, and since a large portion of the project area is in need of terrestrial habitat restoration, watershed restoration, and restoration of succession/disturbance regimes, potential conflicts may exist between short-term protection of listed or proposed species habitats and long-term recovery and resiliency of ecosystems that they inhabit. The hierarchical step-down analysis direction presented in the Step-Down section should aid land managers in strategically identifying risk and opportunities for conservation and restoration of listed species habitats while implementing adopted recovery plans and meeting resource objectives and legal requirements. The Forest Service and BLM will continue to consult with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service on agency decisions that may affect listed species or their habitat. The management direction for listed and proposed species would take precedence over other ICBEMP direction.

Management Direction—Step-down/Adaptive Management/Monitoring

3-42/left/1st partial para

Revise next to last sentence: The hierarchical analysis process will be phased in over five seven years.

3-42/left/2nd full para

Revise 1st sentence: Documenting the proposed and alternative actions and the analysis of their impacts, including cumulative impacts, is a particularly important function of NEPA.

Modifications Made to ICBEMP Supplemental Draft EIS Chapter 3 (Continued)

Page/Column/Paragraph or Table/Fig/Map/Photo

Change Made (bold = new; strikeout = delete)

3-42/right/following first
full paragraph

Add the following paragraph:

The ICBEMP base level and restoration direction includes specific expectations regarding subsequent analyses and/or processes. The intent is that field personnel will conduct related, scale equivalent processes in conjunction with the key step down analyses to the extent appropriate. For example, B-O30 addresses identification of existing old forest stands and source habitats in T watersheds. This can be done in conjunction with Subbasin Review using existing information. B-S42 requires an area influencing sediment delivery to RCAs be identified prior to conducting new management activities. This can be done in conjunction with site-specific NEPA.

3-42/right/last para

Revise 1st bullet:

- ♦ Review information provided in the *Assessment of Ecosystem Components, Integrated Scientific Assessment*, and other applicable science information, **pertinent results from other mid-scale assessments (for example, *The Subbasin Assessments Template* developed under the Northwest Power Planning Council Fish and Wildlife Program)**, and existing local information;

3-43/right/ following the
third full paragraph

Insert:

Since Subbasin Review is intended to provide information that helps identify opportunities and priorities, for Alternative S2 it is intended that Subbasin Reviews should be completed for subbasins identified as high priority for restoration (see Map 3-8 later in this chapter) within three years following the signing of the ICBEMP Record of Decision. This goal is intended to ensure the mid-scale level of information is available sooner than later in areas where greater levels of restoration activities are anticipated. All other Subbasin Reviews or requirements described in B-S1(S2), and/or as they might be modified by B-S2 are intended to be completed within seven years of the signing of the ICBEMP Record of Decision. For Alternative S3, greater flexibility in scheduling and accomplishment of Subbasin Review is intended by a goal that all subbasins would be completed within seven years of the signing of the ICBEMP Record of Decision with no priority placed on the high priority restoration subbasins. Monitoring will assess and evaluate the timeliness and effectiveness of the step down processes, such as Subbasin Review, as well as the accomplishment of management activities.

3-44/left/Objective B-O1

Revise:

B-O1. Objective. Use mid-scale information on the status, risk, and opportunities within a subbasin as context for finer scale analysis and to identify and prioritize types of management activities appropriate to meet broad-scale objectives. ~~Use a collaborative approach and~~ **Inform and coordinate with collaborating partners when using** broad- and mid-scale information to identify and help balance short- and long-term risks to resources, to identify opportunities to conserve and restore resource conditions, and to produce goods and services for people and communities within the subbasin. **Collaboratively revisit risks, opportunities, and**

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Table/Fig/Map/Photo

Change Made (bold = new; strikeout = delete)

	priorities through subsequent subbasin review iterations in response to new, critical issues or information or substantially changed conditions.
3-44/left/rationale for Objective B-O1	Add to end of rationale: <i>Informing and coordinating</i> are the minimum required collaborative approaches. Cooperating and consensus are desired, but not required. (See the Glossary definition of Collaboration for a description of these terms.)
3-44/left and right/standards B-S1(S2) and B-S1(S3)/1 st sentence of each	Revise: ...as described in the latest version of the <i>Subbasin Review Guide</i> (in development).
3-44/right/Standard B-S2	Revise: Subbasins with less than five percent.... where there is consensus among interagency collaborating partners agree that the intent of Subbasin Review has been met through other analytical processes are exempt from standards requiring Subbasin Review. BLM and Forest Service administrative units shall initiate collaboration with NMFS, USFWS, and EPA to discuss the general condition of BLM and Forest Service resources within the subbasin, the role these lands play within the subbasin, and the potential to reduce risks or provide opportunities to meet broad-scale objectives for the subbasin. The need to conduct additional mid-scale or finer scale analyses and the potential to pool resources shall also be discussed.
3-46/left/rationale for Standard B-S2	Revise 2nd sentence: Where the collaborating partners agree that the intent of Subbasin Review (including identifying resource conditions and risks, prioritizing management opportunities, and addressing issues such as connectivity and interrelationships within the subbasin) has been met through previous analysis, efforts should focus primarily on gaining a broader understanding of the conditions, risks, and opportunities.
3-46/left/Standard B-S3	Revise: Conduct Subbasin Review using a subbasin (4th-field HUC, approximately 800,000—1,000,000 acres) or groups of contiguous subbasins as the analysis unit, except where alternative analysis units have been agreed to collaboratively interagency partners reach consensus on an alternative analysis unit.
3-46/left/Standard B-S3	Insert new rationale: Rationale: For this standard, the interagency partners include only federal agencies with interest in the area.
3-46/left and right	Delete Standards B-S4 (S2) and B-S4 (S3) and their rationales. Standard B-S4(S2 and S3) Replace with: B-S4. Standard. The latest version of <i>Ecosystem Review at the Subbasin Scale, A Guide for Mid-scale Inquiry</i> (Subbasin Review Guide; ICBEMP 1999) shall be used when conducting Subbasin Reviews (subject to exceptions under Standard B-S2).
3-47/left/3 rd para	Revise 3rd sentence: These are areas situations where the greatest potential for risk to threatened, endangered, and proposed aquatic species from management activities exists. EAWS will facilitate risk management. Areas previously identified under the Biological Opinions (NMFS 1995 and 1998, FWS 1998; see Alternative S1) as priority watersheds are encompassed by this EAWS trigger as well as the remaining TEP aquatic species habitat excluded from those designations. EAWS will also be used to reduce risks....

Modifications Made to ICBEMP Supplemental Draft EIS Chapter 3 (Continued)

Page/Column/Paragraph or Table/Fig/Map/Photo	Change Made (bold = new; strikeout = delete)
3-47/left/4 th para	<p><i>Delete last sentence and replace with:</i> Managers should consider the scope, intensity, location, and duration of the potential activity(ies). For example, a potential activity could be limited in scope but due to the probable intensity and location it could result in negative effects (on listed aquatic species, for example) that are measurable, last longer than days or weeks, and could prevent attainment of objectives, or are cumulative (affecting resources downstream or upstream of the activity area). An example might be development of a new mining operation. In this instance EAWS would be required prior to this activity.</p> <p>Conversely, potential activities that would be large in scope but due to the location and duration would likely result in impacts that were negligible (unmeasurable), last shorter than days or weeks, and localized (contained) to the activity area. An example might be a prescribed burn. In this example EAWS would not be required prior to proceeding with the activity. These examples highlight the need for interdisciplinary and collaborative discussions when making such determinations prior to initiating project planning.</p>
3-48/left/Standard B-S5(S2)	<i>Revise 1st sentence:</i> Subject to valid existing rights , Ecosystem Analysis at the Watershed Scale shall be conducted....
3-48/left/Standard B-S5(S2)	<i>Revise the last sentence:</i> The only exception is where impacts are anticipated to be negligible, short term, and localized in scope or in the case where there is imminent threat or unacceptably high risk to scarce natural, cultural, or historical resources; human life; or property.
3-48/right/rationale for Standard B-S5(S2)	<i>Insert after 4th sentence:</i> In determining measurable change the project proposal should be evaluated relative to both the types of habitat potentially affected and the location of those habitats.
3-48/right/rationale for Standard B-S5(S2)	<i>Add these sentences to the end:</i> Therefore, it is the expectation that exceptions dealing with imminent threat or unacceptably high risk are very limited and that consideration is given to exploring options such that EAWS can be conducted prior to design of the project. Without benefit of EAWS, some projects may not be located to address risks and opportunities as effectively and efficiently as they would be if preceded by EAWS, however site-specific NEPA and, as appropriate, ESA Section 7 Consultation, would occur and be used to address project specific issues. It is the intent that consensus would be reached by interagency partners regarding the determination of the imminent threat or unacceptable risk that leads to the exception.
3-48/right/Standard B-S6	<i>Revise:</i> The latest versions of the <i>Ecosystem Analysis</i> shall be used when conducting watershed-scale analysis Ecosystem Analysis unless there is consensus among interagency partners that the intent of the watershed scale analysis has been or can be met through an alternate analytical process.
3-50/right/rationale for Objective B-O3	<i>Revise:</i> This objective is intended to include modifications to A1 and A2 subwatersheds and T watersheds to ensure management direction and

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Table/Fig/Map/Photo

Change Made (bold = new; strikeout = delete)

	designations adapt to new information and/or site-specific conditions.
3-51/left/Standard B-S10	Revise: ... should be used in aquatic A1 and A2 subwatersheds and terrestrial T watersheds only if their potential to aid achievement of the objectives outweighs their potential to prevent achievement it has been shown that they would aid achievement of the objectives.
3-52/left/1 st full paragraph	Insert after 2nd sentence: In addition, implementation monitoring would address the impacts the step-down analyses would have on accomplishment of anticipated activities including whether analyses contribute useful information, thereby meeting the intent desired for them; if analyses are accomplished within projected timeframes and commitments of resources; and if analyses are supporting or impeding desired rates of restoration activities.
3-52/left/2 nd full paragraph	Add these sentences to the end: The intent is also to evaluate the broad-scale monitoring data every five years to determine if the ICBEMP Record of Decision is being implemented and if management practices are leading to achievement of the broad scale goals and objectives. Broad scale ecosystem changes occur slowly over time. Management evaluations made too frequently may not detect changes in the ecosystem because cost-effective monitoring systems are not sensitive enough to detect them. However, if ecosystem management evaluations are not conducted or are delayed for too long, irreversible changes may take place without detection. Therefore, five years was selected as an appropriate monitoring interval.
3-52/left/Standard B-S11	Revise: Forest Service and BLM administrative units shall contribute resources to collect, store, and interpret information needed to implement a broad-scale monitoring plan, which will be jointly developed by Forest Service regional offices and BLM state offices through collaboration informing, coordinating with, and cooperating with intergovernmental partners.
3-52/left/rationale for Standard B-S11	Revise: <i>Intergovernmental partners</i> include other federal agencies, state and local governments, tribal governments, resource advisory committees, and provincial advisory councils. Informing, coordinating, and cooperating are the minimum required collaborative approaches. Consensus is desired, but not required. (See the Glossary definition of Collaboration for a description of these terms.)
3-52/left/Objective B-O6 and rationale	Delete.
3-53/right/2 nd para	Revise 2nd sentence: RCA direction will replace direction for riparian areas in existing land use plans (including PACFISH and INFISH) and can not be superseded by less restrictive direction unless new information indicates a need for change and the appropriate NEPA amendment process and consultation is completed.

Base Level—Landscape Dynamics Component

3-54/left/Objective B-O8	Revise 2nd sentence: Hydrologic processes critical for balanced landscapes/ecosystems healthy ecosystems include, ...
3-55/left/Guideline B-G7	Revise: Consider “wildland fire use for resource benefit” (prescribed

Modifications Made to ICBEMP Supplemental Draft EIS Chapter 3 (Continued)

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Change Made (**bold = new; strikeout = delete**)

	natural fire) as a means of managing extensive areas of juniper woodlands and insect- and/or disease-infested forests that have already lost their economic value or are otherwise uneconomical to treat.
3-57/right/rationale for Objective B-O11	<p>Revise 7th bullet:</p> <p>7. Increase in the economic burden of maintaining the quality of recreation and wilderness areas. Uncoordinated efforts throughout the project area have been ineffective against noxious weeds. Noxious weed strategy(ies) need to be consistently implemented project-area wide to reduce the negative impacts of noxious weeds. This objective hinges on a project-area-wide integrated weed management strategy being developed by Forest Service regional and BLM state office staffs, in collaboration with through informing, coordinating with, and cooperating with other federal, tribal, and state officials. (See Glossary definition of Collaboration for a description of these terms.)</p>
3-57/right/Standard B-S13	<p>Revise 'f' bullet: Broad-scale integrated weed management (IWM) strategies shall incorporate these goals:...</p> <p>f. Collaboration and coordination with federal, state, and local agencies; tribal governments; and others, as appropriate</p>
3-58/left/rationale for Standard B-S14	<p>Revise 1st sentence: This standard focuses on using a science-based, noxious weed susceptibility index. This index, Susceptibility of Vegetation Cover Types to Invasion by Noxious Weeds, should be used to prioritize treatment for noxious weeds at a broad scale where prevention of weed spread; detection, inventory, and mapping; and integrated methods of weed control are implemented. within vegetation cover types in the A1, A2, T, and base level areas.</p>
3-59/left/Objective B-O12	<p>Revise: Initiate collaboration Inform and coordinate with affected federally recognized tribes on noxious weed control programs.</p>
3-59/left/rationale for Objective B-O12	<p>Insert at end: Informing and coordinating are the minimum required collaborative approaches. Cooperating and consensus are desired, but not required. (See the Glossary definition of Collaboration for a description of these terms.)</p>
3-59/right/Standard B-S16	<p>Revise: Standard. During site-specific project planning and NEPA analysis, land use plan-level maps of unstable and potentially unstable lands shall be refined and ground-truthed, if necessary, when proposed activities could potentially contribute to mass soil movement. If these maps have not been developed, site-specific identification and evaluation of unstable and potentially unstable lands shall be identified as part of project planning prior to conducting management activities. Until a land use plan is revised, unstable and potentially unstable lands shall be identified as part of any proposed project planning prior to conducting management activities. In order for management activities to not increase the frequency and distribution of landslides, Management actions proposed on unstable and potentially unstable lands outside RCAs should be designed to retain dominant hydrologic functions and processes that influence landslides and not increase the frequency and distribution of landslides.</p>

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Table/Fig/Map/Photo

Change Made (bold = new; strikeout = delete)

3-59/right/B-S16 rationale

Delete last sentence: ~~The intent is to use existing information/data, not to initiate a field inventory effort.~~

3-59/right/Standard B-S17

Revise: During land use plan... quantity calculated. **Apply** ~~Use analytical methods to existing information to that identify unstable... riparian objectives. During site-specific NEPA analysis and planning, land use plan-level unstable and potentially unstable lands map shall be refined and ground-truthed.~~

3-60/left/new objective

Add new objective: B-O13a. Develop and maintain enhanced air quality predictive and monitoring capability for assessing the risks associated with prescribed and wildfire management decisions and for making more informed smoke management decisions.

3-60 /left/Objective
B-O14 rationale

Revise: The biggest danger to broad-scale air quality in the project area ~~is comes~~ from smoke generated by wildfire. In much of the interior Columbia River Basin, biomass production greatly exceeds decomposition rates. Years of wildfire suppression have led to ~~huge~~ **unnaturally high** accumulations of biomass. This biomass can be mechanically removed ~~from the site to prevent undue smoke from wildfires; however, it is generally costly and if not conducted with consideration of ecosystem functions and processes, then the biomass removal could eliminate removes~~ needed nutrients from the site.

3-60/right/Standard B-S19

Revise: Prior to ~~any prescribed~~ **the burning season**, the existing air quality monitoring system shall be identified and described. ~~If needed a plan~~ **Work with state air quality regulators** to revise or expand ~~monitoring shall be developed an appropriate monitoring system to ensure that impacts of prescribed burning on air quality in local communities are predicted and measured. Install and Use the monitoring network as revised to document system to measure the magnitude and extent of air quality impacts from representative prescribed burning and wildland fires and compare these observations with levels forecast by smoke management agencies and impacts predicted through planning. Use available data to determine whether additional mitigation measures are necessary, to help determine te source(s) of... haze.~~

3-60/right/Objective B-O16

Revise: Decisions on management of wildfires and effects on air quality from **planned** prescribed burning burns should be considered in the context of impacts from other sources of particulate matter in the project area, within and across administrative jurisdictional boundaries. **potential local and regional impacts on air quality, visibility and haze, and should include impacts from other sources of particulate matter. Use regional organization(s) with requisite analytical and prediction capability and responsibilities for information gathering, intergovernmental coordination, issuance of burn advisories, and communication services to member organizations, interest groups and the public. Administrative units (national forests and BLM districts) should work with federal, state, tribal, and local air quality management agencies to develop a basin-wide smoke management plan.**

3-61/left/Standard B-S20

Revise: The Forest Service and BLM shall work with state and local smoke and air quality regulation agencies to coordinate smoke management within the project area. Existing organizations and relationships will form the foundation. Prior to any prescribed burning

Modifications Made to ICBEMP Supplemental Draft EIS Chapter 3 (Continued)

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Change Made (bold = new; ~~strikeout~~ = delete)

activities or decision to use wildland fire to achieve management objectives, **coordinate with** appropriate local, tribal, state, and adjacent state air quality management organizations **as well as any multi-state or regional organization established pursuant to achieving Objective B-O16** ~~shall be consulted~~. If such ~~coordination consultation~~ results in a determination that other burn activities are underway or planned in areas or at times that would likely intensify negative air quality impact from the planned burn, additional mitigation measures shall be explored ~~in collaboration with~~ **by informing, coordinating with, and cooperating** the other ~~agencies/~~organizations to minimize such ~~multiple~~ impacts to the extent practicable.

3-61/left/rationale for
Standard B-S20

Insert new rationale: Informing, coordinating, and cooperating are the minimum required collaborative approaches. Consensus is desired, but not required. (See the Glossary definition of Collaboration for a description of these terms.)

3-61/left/Objective B-O17

Revise 1st sentence: ~~Initiate collaboration~~ **Inform and coordinate** with public and private landowners to increase safety in the urban–rural–wildland interface.

3-61/left/rationale for
Objective B-O17

Insert at end: Informing and coordinating are the minimum required collaborative approaches. Cooperating and consensus are desired, but not required. (See the Glossary definition of Collaboration for a description of these terms.)

3-62/left/Objective B-O21

Revise: ~~Coordinate and collaborate the~~ **Inform, coordinate with, and cooperate with affected partners when** planning and ~~implementation of implementing~~ watershed-scale wildland fires across administrative boundaries to manage fuels, restore or maintain ecosystems, and obtain desired distribution of vegetation patches and patterns.

3-62/left/rationale for
Objective B-O21

Revise: **Working with** federal, state, tribal, and local ~~interagency coordination and cooperation are~~ **agencies is** essential to implement successful fire management programs. Increasing costs and smaller work forces require that public agencies pool their resources to successfully deal with increasing and more complex fire management tasks. Collaboration among federal agencies and between federal, state, tribal, and local governments, and private entities results in a mobile fire management work force available for public needs. ***Informing, coordinating, and cooperating are the minimum required collaborative approaches. Consensus is desired, but not required. (See the Glossary definition of Collaboration for a description of these terms.)***

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Table/Fig/Map/Photo

Change Made (bold = new; strikeout = delete)

3-62/right/Road Management
Description and Management Intent

Insert new sidebar summarizing Roads Management Intent:

Roads Management Intent

The Need

Design and maintain a road system that provides desired access. Minimize adverse road-related effects.

Management Direction Related to Roads

Base Level

B-O23 B-O25 B-O27
B-O24 B-G29 B-S25
B-S22 B-O26 B-S26
B-S23 B-S24 B-O28

RCA Management

B-S31 B-S32

Restoration

R-O12 R-S3 R-G12
R-S2 R-G11 R-S5
R-O13 R-S4

T watershed Management

T-S2 T-S3

A1 Subwatershed Management

A1-S2

A2 Subwatershed Management

A2-S2

Priorities

For areas that are designated for conservation or restoration of aquatic and terrestrial habitats, such as A1 subwatersheds, A2 subwatersheds, T watersheds, and riparian areas, the desire for road management is to reduce the negative effects of roads on aquatic and terrestrial resources. The direction in A1, A2, and T areas for the short term is for no new road construction unless needed to achieve aquatic or terrestrial objectives. Further, new roads should be located outside of RCAs unless effects on aquatic, riparian, and terrestrial resources would be greater by using alternative routes.

In other parts of the basin, the priority is to provide a system of roads to meet the social, economic and recreational needs of society, while progressing in a staged approach toward a smaller transportation system that can be effectively and efficiently maintained and managed into the future with minimal environmental impact and contributing to objectives for the aquatic, riparian, forest and rangeland ecosystems.

Process

Roads Analysis is intended to be a flexible tool, driven by road-related issues, which provides context and information to managers in order to assist them in assessing the risks and tradeoffs that come with land management decision-making (Gucinski and Furniss, in press). One such process (USFS 1999), is a six-step tool that may be incorporated at various scales in the step-down process (Subbasin Review, EAWS). Negative effects of road-associated factors on aquatic and terrestrial resources were described by Lee et al. (1997) and Wisdom et al. (2000). Decisions on roads should be made at the local level with involvement from interested and affected parties through the local Access and Travel Management Plan, other transportation plans, land and resource management plans, and project-level NEPA processes. These plans will identify long-term transportation needs, road maintenance practices, and reduce the risk to terrestrial and aquatic resources.

Modifications Made to ICBEMP Supplemental Draft EIS Chapter 3 (Continued)

Page/Column/Paragraph or Table/Fig/Map/Photo	Change Made (bold = new; strikeout = delete)
3-62/right/Road Management - Description and Management Intent	<p><i>Delete entire "Road Management—Description and Management Intent" section and replace with the following:</i></p> <p>The road system on federally administered lands is extensive and diverse. New science information, particularly that generated by the ICBEMP Science Integration Team and Science Advisory Group, indicates that roads are significant modifiers of landscapes and ecological processes. At the same time, roads are needed for public access and tribal needs as well as for accomplishing many management objectives. The challenge is to design and maintain a road system that provides desired access but minimizes adverse road-related effects on other resources, such as water quality, fish, and wildlife.</p> <p>A science-based roads analysis is a tool that can be used to systematically and objectively evaluate road networks and help describe road condition and risk. A roads analysis provides an integrated ecological, social, and economic approach to transportation planning, addressing existing and future roads including those that may be proposed in unroaded areas. ICBEMP road management direction incorporates roads analysis into the step-down process to provide information and context needed to effectively and efficiently reduce road-related adverse effects. Results of roads analyses include maps and narratives that display management opportunities and risks of existing roads to better address future needs, budgets, and environmental concerns. This information provides the support for road-related decisions and facilitates development of transportation plans such as Access and Travel Management plans and other NEPA documents. Decisions on roads should be made at the local level with involvement from interested and affected parties through the local Access and Travel Management Plan, other transportation plans, land and resource management plans, and project level NEPA processes.</p> <p>ICBEMP road direction is intended to accomplish the following:</p> <ol style="list-style-type: none"> 1. Roads determined to be needed for public access, tribal rights, and resource management will be safe, promote efficient travel, and be improved where necessary to minimize adverse environmental effects; 2. Roads that do not meet these needs will be closed or obliterated and ecological values restored; 3. New road construction will be reduced from past levels. New roads into watersheds that are currently unroaded or have very few roads will be rare. New roads into such areas could occur following analysis that demonstrates that access is needed to prevent or address imminent environmental damage or provide for valid existing rights. <p>The biggest change to existing road systems is expected in areas that are highly roaded and have high road-related risks to resource values, where action has not already been taken to address the problem.</p>

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Change Made (bold = new; strikeout = delete)

The overarching intent for roads management within the ICBEMP is to progress toward a smaller transportation system that can be maintained into the future with minimal environmental impact. In recognizing that this intent cannot be met instantaneously, the direction suggests a staged approach that concentrates short-term efforts on reducing road-related adverse effects, while determining the long-term road system needs and locations in a manner that maintains choices for future generations. Road management guidance in existing plans such as the Grizzly Bear Recovery Plan and newer land use plans already moves in this direction.

3-63/left/Objective B-O23

Revise: Determine the long-term road system that supports natural resource objectives, **minimizes road-related risks and adverse effects from existing and future planned roads**, and provides access to public lands. ~~while minimizing road-related risks and adverse effects from existing and future planned roads.~~

3-63/left/Objective B-O24

Revise: ~~Use existing information~~ During Subbasin Review and EAWS to characterize...

3-63/right/Standard B-S22

Revise: Roads analysis shall be incorporated into or conducted concurrently with ~~watershed-scale analysis, such as EAWS, the analyses produced in compliance with the 303D protocol that may result in a water quality restoration plan, the stepdown process, and/or site-specific project analysis.~~

3-63/right/rationale for
Standard B-S22

Revise 1st paragraph: Roads analysis is intended to be a flexible tool, driven by road related issues, that provides context and information to managers in order to assist them in assessing the risks and tradeoffs that come with land management decision-making (Gucinski and Furniss, in press). ~~Roads analysis is the tool to assist land managers in balancing road system objectives and provides the context and information needed for assessing tradeoffs and risk prior to decision-making. It is intended to be flexible and driven by road-related issues important to the public and to managers. It promotes a multi-scale approach for tailoring analysis techniques to individual situations, to assure that these issues are examined in the proper context. The process provides a set of analytical questions as guidance that can be used to tailor analysis techniques to individual situations. The questions address road relationships to aquatic and riparian resources, water quality, terrestrial wildlife, ecosystem function, economics, commodity production, access, minerals, range, recreation, and other resources. The analysis should identify issues that address road relationships with aquatic and riparian resources, water quality, terrestrial wildlife, ecosystem function, economics, commodity production, access, minerals, range, recreation, and other resources.~~

3-64/left/Objective B-O25

Revise: New road building should rarely occur in watersheds that are currently unroaded or have very few roads. New roads **constructed in** into these areas could occur following roads analysis ~~and/or NEPA analysis, step-down, and decision-making processes that determine future road needs in that considers the larger watershed context.~~ These analyses should weigh the relative habitat values of species potentially affected by roads, such as anadromous fish and wide-ranging carnivores, against the need to address large-scale environmental damage or public

Modifications Made to ICBEMP Supplemental Draft EIS Chapter 3 (Continued)

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safety. See also management direction for A1 and A2 aquatic subwatersheds regarding new road building.

3-64/right/Standard B-S24

Revise: Access and Travel Management Plans or other transportation plans shall be developed or revised within the next 10 years to address risks identified in a the roads analysis. ~~These plans shall identify long-term transportation needs (including needs for public access) and road maintenance practices.~~

3-64/right/rationale
Standard B-S24

Revise: The intent of this standard is that decisions on management of roads should be made at the local level with involvement from interested and affected parties (including local, county, and tribal entities) through the local Access and Travel Management Plan processes. **The intent is for these plans to identify long-term transportation needs, road maintenance practices, and reduce the risks to terrestrial and aquatic resources.**

3-64/right/Standard B-S25

Revise: New roads and other transportation facilities should be located outside of RCAs unless effects of other alternatives are greater to aquatic, riparian, water quality, and/or terrestrial resources, as supported/ determined by the appropriate analysis and decision-making process, including, ~~as appropriate~~ **when necessary**, ESA consultation. When crossing RCAs with roads, ~~appropriate~~ **site-specific prescriptive** measures shall be used to mitigate adverse effects.

3-64/right/ Standard B-S26

Revise: Construction of new and reconstruction of existing road crossings of streams and rivers that currently or historically supported native fish species shall maintain and restore fish passage, fish spawning, and channel stability. ~~unless passage would allow undesirable non-native fish distribution expansion that would result in adverse interactions with native fish.~~ **Exceptions may be warranted where improving or restoring native fish passage may allow the introduction of exotic, non-native fish species.**

3-64/right/new rationale for
Standard B-S26

Insert new rationale: Activities that improve native fish passage for connectivity may affect channel stability by eliminating migration barriers, which may also allow undesirable expansion of non-native fish populations. Information from a roads analysis or step-down process should identify improvement and restoration alternatives where stream channel integrity may be negatively impacted and/or where increased distribution of exotic fish species would result in adverse interactions with native fish.

Base Level—Terrestrial Source Habitats

3-65

Add new sidebar in Terrestrial Source Habitats section:

Spatial Prioritization of Terrestrial Restoration and Conservation Opportunities During the Step-down Process

Spatial prioritization (identifying specific areas on the ground that are important) of restoration and conservation opportunities is an important component of the step-down process. Spatial prioritization is necessary to facilitate achievement of ICBEMP objectives with limited resources. The following characterizations can be used to identify spatial priority of terrestrial restoration and conservation opportunities.

Watersheds or subwatersheds can generally be characterized in three conditions. These conditions are described in the following paragraphs.

- Condition 1:** In these areas, the amount and distribution of source habitats, and the associated disturbance processes that maintain these habitats, have undergone relatively little change since the historical period. From a broad-scale perspective certain source habitats have declined substantially in geographic extent from the historical to current period. However, in certain watersheds or subwatersheds, those same source habitats closely resemble historical vegetation conditions and functions. These are Condition 1 areas, and have been identified as T watersheds in this EIS. These areas would be managed with a short-term conservation emphasis to maintain current conditions and a long-term restoration emphasis to facilitate species persistence and to expand the geographic extent and connectivity of source habitats (see T watershed management direction). Given that vegetation processes in these areas appear to be functioning in a sustainable manner, changes in current management are generally not necessary. However, activities may be needed to maintain these sustainable conditions. These areas would be of a high priority for actions that would maintain the current conditions. For example, in areas of dry forest PVG where fire suppression is necessary to protect other values, an active prescribed fire program may be necessary to maintain sustainability. In another case on a rangeland area susceptible to exotic weed invasion, an active integrated weed management strategy (that is, preventing an increase in activities that may introduce exotic species) may be necessary to maintain sustainability.
- Condition 2:** In these areas, the amount of source habitats that have declined substantially in geographic extent from the historical to current period at the broad scale has remained neutral or increased within the local area, but the distribution, quality, or sustainability of these source habitats has changed moderately from historical conditions. The extent of vegetation communities will often closely resemble historical vegetation amounts at a watershed or subwatershed scale. However, the current distribution of vegetation communities will vary from that produced by historical disturbance regimes, or other factors such as roads will have degraded the quality of habitats, reducing their usefulness. These areas could be prioritized to restore habitat quality through repatterning to achieve expected vegetative community distribution and to reduce factors that are adversely affecting habitat usefulness. For example, restoration efforts could focus on reestablishing expected disturbance regimes to achieve repatterning of vegetative communities. In another case the density of roads could be reduced to increase the usefulness of habitats. From a terrestrial species standpoint, these areas could be of a high priority for restoration actions where the quality or distribution of habitat is of greater concern than the amount of habitat.

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Spatial Prioritization of Terrestrial Restoration and Conservation Opportunities During the Step-down Process (Continued)

Condition 3: In these areas, the amount of source habitats that have declined substantially in geographic extent from the historical to current period at the broad scale has also declined locally, and disturbance processes are not functioning as would be expected from a historical perspective. Vegetation would largely be characterized by remnant, isolated patches, and habitat quality has been substantially degraded by various factors (such as roads and human disturbances). These areas could be prioritized to restore habitat abundance and quality. Reduction of the factors which adversely affect habitat usefulness would be of a lesser priority until expected vegetation and disturbance regimes are re-established. In some cases these areas may have transitioned to a point where expected vegetation and processes have changed and restoration may not be possible with current technology. Restoration actions would focus on areas with continued opportunity for success. For example restoration efforts could focus on reestablishing expected vegetation and disturbance regimes to achieve repatterning of vegetative communities where changes in physical processes do not limit the potential for success. From a terrestrial species standpoint these areas could be of a high priority for restoration actions where the amount and quality or distribution of habitat is of greatest concern.

A broad-scale estimate of these conditions, summarized at the scale of the watershed, is contained in *A Habitat Network for Terrestrial Wildlife* (Wisdom et al. 2000a). This report describes current habitat conditions for Families 1, 2, 4, 11, and 12, which are the focus of broad-scale habitat management and direction in the EIS process. Estimates of these conditions were based on the analysis of broad-scale data and are expected to have some error at the scale of individual watersheds. However, this broad-scale characterization could provide a starting point for local prioritization of conservation and restoration activities.

3-66/right/Standard
B-S27 rationale

Add to the end of the rationale: In timber harvest areas, it may be necessary to avoid specific areas or modify harvest practices to maintain safety standards and to retain these trees.

3-67/left/Guideline B-G31

Revise 1st sentence: ~~Seedtree or group selection methods~~ **Regeneration harvest** may be used...

3-67/right/Guideline B-G39

Delete text, replace with: Removal of root-infected stumps on some highly specialized sites can be considered to achieve plan objectives. Minimize soil damage and reforest with shade-intolerant species that are most likely to tolerate the pathogen.

3-67/right/Objective B-O30

Revise 1st paragraph: [Terrestrial Families 1 & 2] In the short term, maintain and prevent loss of old forest in dry and moist forest potential vegetation groups (PVGs). Maintain old forest in patch sizes **that are** consistent with the landform, climate, and biological and physical conditions of the ecosystem. Identify single story and multi-story old forest stands in the interior ponderosa pine, Pacific ponderosa pine, and Sierra

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Change Made (bold = new; strikeout = delete)

Nevada mixed conifer cover types. **Where appropriate, change the stand structure from multi- to single story. Identify single-story and multi-story old forest stands in the Douglas-fir, western larch, western white pine, aspen, and cottonwood-willow cover types.** Take steps to prevent the loss of ~~this~~ **these** relatively scarce habitats from natural or human-caused disturbances. Actively manage to promote their long-term sustainability and to preclude uncharacteristically severe wildfire through activities such as prescribed fire, stewardship thinning, and/or other vegetation/biomass management techniques.

3-69/right/Standard B-S29(S2)

Revise: Prior to completing the process described in Standard B-S30(S2), the tables in Appendix 12 shall be used to determine snag numbers and coarse woody debris levels whenever vegetation management is done. **If adequate numbers of snags greater than 21 inches diameter at breast height are not available prior to vegetation management activities to meet the levels indicated in Appendix 12, then a mix of the largest snags available shall be substituted.**

3-70/left/Standard B-S30(S2)

Revise next to last sentence: When using any of these processes, administrative units shall ~~collaborate with~~ **inform** appropriate agencies, governments, or groups ~~so that this standard is applied consistently.~~

3-70/left/rationale for Standard B-S30(S2)

Insert at the end of the rationale: Coordinating, cooperating, and consensus are desired collaborative approaches when developing appropriate snag numbers, but informing other agencies is the minimum approach required. (See the Glossary definition of Collaboration for a description of these terms.)

3-70/left and right/Objective B-O32

Revise: ~~Maintain upland rangelands in proper functioning condition~~ **Upland rangelands must first be in proper functioning condition to allow for restoration of desired conditions. Areas in proper functioning condition should be prevented from becoming non-functioning. This can be done by addressing the biological needs...**

3-70/right/rationale for Objective B-O33

Add the following paragraph to the end:
Significant loss of rangeland species habitat has occurred from conifer encroachment into grassland areas, primarily because of altered fire regimes in the dry forest and grassland PVGs in the ecotone. Historically these grassland areas were savannahs containing widely dispersed trees. Maintaining existing grassland areas and restoring grassland areas by reducing tree densities is necessary to improve outcomes for some grassland associated species.

3-70/right/Objective B-O34

Revise: Rangelands seeded... ~~native animal~~ **terrestrial species** habitat, nutrient...

3-70/right/rationale for Objective B-O34

Delete and replace with: Some seedlings, such as older crested wheatgrass seedlings, are essentially monocultures specifically used for forage production or to reduce livestock grazing pressure on native rangelands. The intent of this objective is for seedlings to meet certain minimum functional and process needs to meet overall ecosystem health, provide habitat for terrestrial species, and maintain healthy source habitats at larger scales.

3-70/right/Objective B-O35

Delete and combine with Objective B-O34.

Modifications Made to ICBEMP Supplemental Draft EIS Chapter 3 (Continued)

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Change Made (bold = new; strikeout = delete)

Base Level—Aquatic/Riparian/Hydrologic Component

3-72/left/1 st para/1 st sentence	Revise: Management activities ... within or affecting RCAs that would not maintain existing fully functioning conditions and processes or lead to improved conditions and processes would not meet the intent of ICBEMP standards and objectives.
3-72/left/3 rd para	Revise 1st sentence: The following objectives and standards apply to management activities and land uses within riparian conservation areas on Forest Service- or BLM-administered land with one exception. Road construction/reconstruction direction within RCAs is provided in the Road Management section under both the Base Level and Restoration sections.
3-72/left/3 rd para	Revise 4th sentence: In the absence of subbasin and/or watershed scale context, the project has to be evaluated against the objectives in isolation using WCI s or the modified NMFS/USFWS matrix of pathways and indicators (see Appendix 9 in the Final EIS).
3-72/right/Objective B-O37	Revise: Maintain and improve the physical integrity of fully functional aquatic ecosystems, including shorelines, banks, and bottom configurations. Improve aquatic ecosystems (through restoration and/or passive ["hands-off"] management of natural recovery processes) that are not fully functional.
3-72/right/Objective B-O38	Revise 1st sentence: Maintain and improve fully functional riparian and wetland vegetation and improve (through restoration and/or passive ["hands-off"] management of natural processes) less than fully functional riparian and wetland vegetation to:...
3-72/right/rationale for Objective B-O38	Insert after first sentence: Types of riparian and wetland vegetation are a reflection of site factors such as soils.
3-73/left/Standard B-S31	Revise: New management activities... maintaining or improving banks, shorelines, bottom configuration, amount and distribution of woody debris, thermal regulation, characteristic erosion rates, and amount and distribution of woody debris, thermal regulation, characteristic erosion rates, and amount and distribution of source habitats (subject to valid existing rights) fully functional aquatic/riparian conditions and processes, and improving conditions and processes (through either active or passive measures) that are not fully functional. Watershed Condition Indicators (WCIs), or NMFS/USFWS matrices of pathway and indicators if WCIs are not developed yet, shall be linked to objectives and used to guide development and evaluate proposed activities and determine consistency consistent with RCA management objectives. The WCIs or matrices will be used as a suite of indicators. Each indicator will have value ranges defining functioning, functioning at risk, and non-functioning conditions. See the management intent and direction for WCIs for further detail.

Page/Column/Paragraph or Table/Fig/Map/Photo	Change Made (bold = new; strikeout = delete)
3-73/left and right/Standard B-S32	<p>Revise: Existing land uses, facilities, and actions within or affecting RCAs shall be modified discontinued, or relocated if they are not maintaining or improving banks, shorelines, bottom configuration, amount and distribution of woody debris, thermal regulation, characteristic erosion rates, and amount and distribution of source habitats fully functional aquatic/riparian conditions and processes, or improving conditions and processes (thorough either active or passive measures) that are not fully functional.</p> <p>Watershed Condition Indicators (WCIs), or NMFS/USFWS matrices of pathway and indicators if WCIs are not developed yet, shall be linked to objectives and used to guide development and evaluate existing land uses, facilities, and actions within or affecting RCAs and determine consistency consistent with RCA management objectives. The WCIs or matrices will be used as a suite of indicators. Each indicator will have value ranges defining functioning, functioning at risk, and non-functioning conditions. See the management intent and direction for WCIs for further detail.</p>
3-73/left/Guideline B-G42	Delete guideline.
3-73/right/Standard B-S33	<p>Revise: During licensing or relicensing of hydroelectric projects, terms and conditions that achieve aquatic and RCA management objectives over the new license term shall be submitted to the Federal Energy Regulatory Commission, where appropriate.</p>
3-73/right/rationale for Standard B-S34	<p>Delete and replace with the following: Valid existing rights may limit land management agency discretion in some cases, such as in certain situations under the mining laws. This standard requires the use of existing authorities to minimize impacts of uses conducted pursuant to valid existing rights. For example, where lands are not withdrawn from mining or where valid mining claims exist in withdrawn areas, agencies may impose reasonable conditions on mining activities that are necessary to protect public resources.</p>
3-74/left/Standard B-S38	<p>Revise 1st sentence: Avoid delivery of chemical... surface waters shall be prohibited.</p>
3-74/right/2 nd para	<p>Revise 2nd sentence: This first tier analysis is done by applying an agreed upon protocol either through an EAWS or a programmatic planning analysis, whichever is the appropriate scale.</p>
3-74/right/4 th para	<p>Revise 1st sentence: Conceptually, the first tier analysis results in identification of ecologically appropriate RCA criteria by using existing information to characterize the extent, conditions, and trends of riparian areas within the analysis area by applying an agreed upon protocol.</p>
3-75/left/1 st para	<p>Revise 2nd sentence: The Forest Service and BLM will initiate collaboration would inform, coordinate with, and cooperate with intergovernmental partners when developing ecologically appropriate RCA delineation criteria as described in Standard B-S40.</p>
3-75/left/3 rd para	<p>Revise last sentence: On-the-ground delineation of RCAs will be conducted by land management personnel with expertise or training in the identified riparian functions and processes and local site conditions.</p>

Modifications Made to ICBEMP Supplemental Draft EIS Chapter 3 (Continued)

Page/Column/Paragraph or Table/Fig/Map/Photo	Change Made (bold = new; strikeout = delete)
3-75/right/Standard B-S40	Revise: During EAWS or through the appropriate programmatic planning processes (including land use plan revision) (tier 1) using an agreed upon protocol , interim RCA criteria shall be...
3-76/left/Standard B-S40	Insert after 1st full paragraph: In the RCA delineation process, the Forest Service and the BLM shall inform, coordinate with, and cooperate with inter-governmental partners. When the delineation may affect listed species, the appropriate vehicle for collaboration with the National Marine Fisheries Service and the U.S. Fish and Wildlife Service is the Endangered Species Act (ESA) consultation process.
3-76/left/rationale for Standard B-S40	Insert at end: <i>Informing, coordinating, and cooperating</i> are the minimum required collaborative approaches. Consensus is desired, but not required. (See the Glossary definition of Collaboration for a description of these terms.)
3-76/Standard B-S42(S2) and B-S42(S3)	Revise, delete first sentence of each: Prior to conducting new management activities, an area influencing sediment delivery to RCAs along...
3-76/rationales for B-S42(S2) and B-S42(S3)	Insert after second sentence: Other factors such as soil characteristics and ground cover also influence sediment delivery. Insert after last sentence: To implement this standard, field units can use either the relationship displayed in Figure 1, Appendix 9, or locally developed sediment delivery relationships to identify the sediment delivery influence area.
3-77/left/1 st full para	Insert after 2nd sentence: (Note: Appendix 9 in the Supplemental Draft EIS included two matrices—one developed by the U.S. Fish and Wildlife Service, and the other developed by the National Marine Fisheries Service. These matrices have been combined into one matrix, which is provided in Appendix 9 in the Final EIS.)
3-77/left/2 nd full para	Delete entire paragraph.
3-77/left/ 3 rd full para	Revise: The WCIs are being developed by an interagency team and should be available for inclusion in the ICBEMP Record of Decision. In the event the WCIs are not fully developed and implementable at the time of the decision, While the WCIs are being developed the intent is to use...
3-77/right/B-O39	Revise 1st sentence: ...use the NMFS/USFWS matrices of pathways and indicators (see Appendix 9) as interim indicators until WCIs are developed ready for implementation.
3-77/right/Standard B-S43	Revise 1st sentence: Watershed Condition Indicators (WCIs) shall be developed and refined at the watershed scale....

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Table/Fig/Map/Photo

Change Made (bold = new; strikeout = delete)

3-77/right/Standard B-S44	Revise 1st sentence: Until WCIs are implemented While WCIs are being developed, the “matrix of pathways and indicators” (See Appendix 9 for description)...
3-78/left/3 rd full para	Revise 3rd sentence: Water quality standards have been are mostly established by states and tribes, and approved by the EPA, to ensure beneficial uses are supported.
3-78 /right/Objective B-O40	Revise: Maintain water quality and hydrologic processes necessary to support beneficial uses including healthy riparian, aquatic, and wetland ecosystems. Water quality and hydrologic processes should be within the range of variability representative of the inherent capability of the watershed area that supports beneficial uses.
3-78/right/1 st para	Revise 3rd sentence: Application of this 303(d) protocol or an alternate analytical process agreed to by the interagency partners provides reasonable assurance that listed and threatened waters...
3-78/right/Standard B-S45	Revise: The application of the 303(d) protocol or an alternate analytical process agreed to by the interagency partners at watershed or subbasin scale shall be scheduled...
3-79/left/rationale for Standard B-S45	Revise last sentence: The application of this protocol or an alternate analytical process agreed to by the interagency partners in this context....
3-79/right/Standard B-S46	Revise: Apply the 303(d) protocol or an alternate analytical process agreed to by the interagency partners where any land management activity...
3-79/right/rationale for Standard B-S46	Revise 1st sentence: Application of the protocol or an agreed upon alternate analytical process where...
3-79/right/Objective B-O41	Revise: In subbasins (or within smaller watershed areas) with mixed ownership, use the 303(d) protocol or an alternate analytical process agreed to by the interagency partners on federal lands. and provide the opportunity to use the protocol to address water quality problems collaboratively with Inform, coordinate with, and cooperate with non-federal landowners, watershed councils, state agencies, tribes, the Natural Resource Conservation Service, and other interested parties, providing them an opportunity to use the agreed upon process to address water quality problems. Strive to develop water quality restoration plans that apply to an entire watershed or subbasin.
3-80/left/rationale for Objective B-O41	Insert at end: Informing, coordinating, and cooperating are the minimum required collaborative approaches. Consensus is desired, but not required. (See the Glossary definition of Collaboration for a description of these terms.)
3-82/right/Guideline B-G45	Revise: “Contingent on human safety concerns, Consider managing human access and minimizing potential disturbances to protect caves,□...”
3-83/left/Objective B-O47	Revise 3rd sentence: A conservation strategy would include the entire range of a species and should be developed collaboratively by all affected agencies and administrative units. Inform, coordinate with, and cooperate with affected partners when developing conservation strategies, since they include the entire range of a species, which can cross administrative boundaries.

Modifications Made to ICBEMP Supplemental Draft EIS Chapter 3 (Continued)

Page/Column/Paragraph or Table/Fig/Map/Photo	Change Made (bold = new; strikeout = delete)
3-83/right/rationale for Objective B-O47	<p>Revise 3rd sentence: A species of concern has a wide... or ranked as G1-G3 (S1-S3 for nonvascular plants) by...</p> <p>Insert at the end of the rationale: <i>Informing, coordinating, and cooperating</i> are the minimum required collaborative approaches. Consensus is desired, but not required. (See the Glossary definition of Collaboration for a description of these terms.)</p>
3-83/right/last para	<p>Revise 2nd sentence: Two Three of the species, gray wolf and, grizzly bear, and lynx have been listed under the Endangered Species Act.</p>
3-84/left/Objective B-O49	<p>Revise: B-O49. Objective. Coordinate Cooperate with federal, state, local and other organizations at a multi-regional scale (that is, Greater Yellowstone Area to/across Canadian border, Oregon Cascades to Eagle Cap to Hells Canyon to Central Idaho, north Cascades to north Idaho to/across Canadian border, Cascades to/ across Canadian border) across multiple jurisdictional boundaries to develop broad-scale connectivity/linkages of wide-ranging carnivore habitat.</p>
3-84/left/rationale for Objective B-O49	<p>Insert at the end of the 1st paragraph: Wisdom et. al (2000) contains a synthesis of carnivore habitat needs, consideration of this information will aid in developing these linkages.</p> <p>Revise 2nd paragraph: Providing such habitat connectivity requires multi-jurisdictional coordination. The purpose of this objective is to clarify that the Forest Service and BLM managers shall take the lead in coordinating facilitating efforts to provide for broad-scale connectivity of habitat for wide-ranging carnivores... evident in ten years. For example, the Interagency Grizzly Bear Committee (IGCB) recently sponsored a workshop reviewing the state of knowledge on linkage zones and a second workshop to identify linkage zones. The IGBC plans to consider the next step in facilitating identification and management of linkage zones at its winter 2001 meeting.</p>
3-84/right/Standard B-S54	<p>Revise: When planning for site-specific activities within areas identified as important to wide-ranging carnivores, documentation in NEPA analyses (EAs or EISs) should shall include the predicted effects of these activities on source habitat for these carnivores and their prey species at the subbasin level.</p>
3-85/right/2 nd full para	<p>Revise: The following management direction for listed and proposed species would take precedence over all other ICBEMP base level direction restoration direction, and less restrictive direction in land use plans (see the Hierarchy of Management Direction section, earlier in this chapter).</p>
3-85/right/Standard B-S55	<p>Revise: Relevant management activities shall be designed and implemented to be consistent with approved adopted recovery plans, conservation strategies, and other appropriate reports.</p>
3-85/right/rationale for Standard B-S55	<p>Following the second sentence, insert: An adopted recovery plan is one for which a recovery strategy has been developed, approved,</p>

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Change Made (bold = new; strikeout = delete)

signed, and appropriately integrated into land use plans by the Forest Service or BLM. A conservation strategy or other appropriate report will be will be considered adopted when a decision document is signed *and* appropriately integrated into land use plans by the appropriate Forest Service or BLM official.

Revise last sentence: Other appropriate reports (such as the *Interagency Grizzly Bear Guidelines* [Interagency Grizzly Bear Committee 1986] or *Habitat Conservation Plans*)...

Base Level—Social-Economic-Tribal Component

3-86/left/1st para

Revise 1st sentence: The socio-economic-tribal component of the... and to provide for sustainable levels of products and services from lands administered by the Forest Service and BLM **that are sustainable, within ecosystem capabilities, and are predictable, to the degree predictability is controllable by the agencies.** ~~within the capabilities of the ecosystem.~~ There are many factors that affect the predictability of product and service levels provided from agency lands. Some are within the control or influence of the land managers. Others, such as economic market factors (supply, demand, price), catastrophic natural events, funding levels, and legislative changes in policy or direction, are generally not often under the control of the land managers. These external factors can affect the actual levels of products and services provided from public lands, compared to the levels that were predicted. Reservation communities are also some...

3-86/right/Objective B-O55

Revise: Derive social and economic benefits, ... through producing, in **accordance with land use plan allocations and management direction,** a variety of goods and services from Forest Service- and BLM-administered lands **that are sustainable within ecosystem capabilities and predictable to the degree controllable by the agencies.** ~~according to land management plan allocations and management direction~~

3-86/right/rationale for
Objective B-O55

Add the following sentence at end: Many factors affect the predictability of product and service levels provided from agency lands. Some are within the control or influence of the land managers. Others, such as economic market factors (supply, demand, price), catastrophic natural events, funding levels, and legislative changes in policy or direction, are generally not often under the control of the land managers. These external factors can affect the actual levels of products and services provided from public lands, compared to the levels that were predicted.

3-87/left/1st para

Revise last sentence: ~~...targeting contracts for the local workforce~~ making agency contracts as accessible as possible to the local workforce...

3-87/left/Objective B-O56

Revise: Target **Design** contracts for services and sale of products from federal **Forest Service- and BLM-administered** lands to local firms and individuals as permitted by existing authorities **to be as accessible and attractive as possible** and where it will help...

3-87/left/Guideline B-G47

Add information before 1st sentence: To the extent possible coordinate project design with local communities and tribal governments that promote local participation, partnerships, expansion and retention of local skilled workforce and effective implementation across ownerships.

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Change Made (bold = new; ~~strikeout~~ = delete)

3-88/left/rationale for
Objective B-O58

Revise 1st sentence: The intent of this objective is to help sustain ~~an area~~ through the transition **communities during transition from economically specialized to more diversified economies.**

Revise 3rd and 4th sentences: The intent of this objective... The objective stems from the recognition... community vitality, and **the belief** that the continued existence... For more information... see the *Economic and Social Conditions of Communities* (ICBEMP 1998) **and Appendix 15, available at www.icbemp.gov or by calling 208.334.1770.**

3-88/left/rationale for
Objective B-O59

Revise last sentence: Improved collaboration can improve predictability by increasing the level of public support for, and ~~reducing resistance to~~ **understanding of**, management strategies and activities.

3-88/left/Objective B-O59

Revise: ~~Promote collaboration through increased~~ **Increase** intergovernmental coordination with federal, state, county, tribal governments, and Resource Advisory Committees/Provincial Advisory Councils, in planning, implementing, and monitoring ~~efforts~~.

3-89/left/Objective B-O63

Revise: Objective B-~~O643~~ B-O63. Foster compatibility of land uses and management strategies with local economic development goals through ~~collaboration~~ **informing, coordinating with, and cooperating** with local entities **agencies**.

3-89/left/rationale for
Objective B-O63

Insert at the end of the rationale: Informing, coordinating, and cooperating are the minimum required collaborative approaches. Consensus is desired, but not required. (See the Glossary definition of Collaboration for a description of these terms.)

3-91/right/Standard B-S64

Revise 1st sentence: When conducting Subbasin Review and/or EAWS, tribal participation shall be solicited ~~and collaboration with~~ **and** affected American Indian tribes **shall be informed and coordinated with** ~~undertaken~~ to identify resources and places of value.

3-91/right/new rationale for
Standard B-S64

Insert new rationale: Informing and coordinating with tribes are the minimum required collaborative approaches. Cooperation and consensus are desired, but not required. (See the Glossary definition of Collaboration for a description of these terms.)

Management Direction—Restoration

3-92/left/2nd para

Switch the 1st and 2nd paragraphs of the “Description and Management Intent: Overall” section and revise the new 1st paragraph as follows:

Restoration management direction... ~~(see following discussion)~~. It is also intended that the restoration management direction would apply whether existing funds or additional funds are used to implement the activities. It is expected that the ICBEMP restoration management direction would change existing local restoration priorities. Development of the restoration management strategy is described more fully in Appendix 15, available at www.icbemp.gov or by calling 208.334.1770.

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Change Made (bold = new; strikeout = delete)

3-92/right/1st full para*Delete 2nd sentence.*3-93/right/1st para

Add to follow 1st paragraph: The outcomes projected in the effects analysis in Chapter 4 of the ICBEMP EIS are a reflection of budget allocations consistent with the priorities highlighted in the proposed decision. The current budgets associated with programs within the project area that would be directed by this decision would be allocated to the highest identified priorities, irrespective of administrative (either Forest Service or BLM, Region or State, Forest or District) boundaries and would be focused on ecosystem conditions and desired change in or maintenance of those conditions. Thus the intent is for Forest Service and BLM managers to formulate and distribute budgets to the priority areas first, within the constraints of law and national direction. Budget allocations apply to current funding as well as new funding that might be made available to implement the EIS or special restoration funding provided through special initiatives. It is recognized that this is fundamentally different than budget allocations that have occurred historically within the project area.

Landscape Restoration
3-104/right/rationale for
Objective R-O4

Revise 2nd sentence: To reduce further fragmentation of the landscape, ~~priority should be given to restoring whole hydrologic units~~ **opportunities and priorities for vegetation management should be applied to entire hydrologic units in context with the appropriate scale of analysis** if resources are available and if the landbase provides the opportunity.

3-105/left/Objective R-O6

Revise: ~~Sustain~~ **Restore** hydrologic processes characteristic of the geoclimatic settings through management actions that resemble effects of natural disturbance processes. Hydrologic processes critical for ~~balanced landscapes/ecosystems~~ **healthy ecosystems** include, but are not limited to, stream flows and sediment in channels.

3-105/left/Objective R-O7

Delete 1st sentence and replace with: **Restore and maintain stream flow regimes to retain characteristic sediment, nutrient, and wood routing needed to create desirable riparian, aquatic, and wetland habitats.**

3-106/right/ 2nd para

Revise: The intent of ICBEMP road restoration direction is to reduce road-related adverse effects through a variety of techniques including **reconstruction, managing use-levels/closures, and** obliteration. ; ~~closures, and road improvements.~~ The direction acknowledges that road risk and road effects are not determined solely by road density but vary substantially depending on **road location, design, and condition.** ~~factors such as geology, landform, climate, slope position, road condition, and road design.~~ A science-based analytical tool...

3-106/right/ 3rd para

Revise 2nd sentence: Restoration **priorities** should focus primarily in areas where reduction of adverse effects and benefits to resources could be maximized ~~for example, along valley bottoms and main river corridors and in areas where terrestrial, riparian, and aquatic species are negatively affected associated with roads~~ **as identified through a roads analysis.**

3-106/right/Standard R-S2

Revise: A science-based roads analysis ~~process~~ shall be used at multiple scales ~~as appropriate~~ **and incorporated into the appropriate step-down**

Modifications Made to ICBEMP Supplemental Draft EIS Chapter 3 (Continued)

Page/Column/Paragraph or
Table/Fig/Map/Photo

Change Made (bold = new; ~~strikeout~~ = delete)

	and decision-making processes to systematically and hierarchically evaluate existing road system needs and to establish priorities for road restoration activities.
3-107/left/rationale for Standard R-S2	Revise rationale: The A roads analysis process is intended to identify a balance between (a) the retention of a safe, efficient road system to meet public demands, land stewardship, and tribal needs; and (b) the identification of those roads no longer needed and reduction of adverse effects and potential adverse effects on clean water, aquatic/riparian and terrestrial species habitats, native vegetation, and other natural resources. The intent is that the a roads analysis process will be a component of Subbasin Review, EAWS, or other processes, as appropriate, step-down process and will support Forest Service or BLM land use plan revision, Access and Travel Management Plans and other transportation plans, water quality restoration plans, and site-specific activity planning. The results of a roads analysis completed under Standard B-S22 will meet the needs of this Standard.
3-107/left/Standard R-S3	Delete Standard R-S3 and its rationale.
3-107/right/Standard R-S4	Revise: Information from the a roads analysis shall be used when designing projects to reduce road-related adverse effects over the next 10 years. Quality and quantity road indicators and road-related use shall be used to assess the adverse effects on aquatic/riparian and terrestrial species and their habitats. Road quality will be measured by progress toward the road system determined to meet future transportation needs. The primary indicator for road quantity will be Forest Service/BLM-classified roadway miles per square mile measured at the subbasin scale. The primary indicators for road-related use are amount, type, and season of use.
3-107/right/rationale for Standard R-S4	Revise 1st sentence: The intent of this standard is that implementation of restoration activities will be prioritized based on risks and budgets; so that the most significant effects can be reduced first.
3-108/left/Standard R-S5	Delete existing standard and replace with the following: Restoration activities in areas where existing culverts and other crossings do not provide for fish passage or connectivity, or that pose a substantial risk to riparian conditions shall be prioritized through roads analysis and the step-down process. During construction or reconstruction of roads in association with restoration-related activities, new or existing culverts, bridges, and other stream crossings shall be designed or improved to accommodate a 100-year flood event, including associated bedload and debris.
3-108 /left/rationale for Standard R-S5	Revise 1st sentence: Structures posing a substantial risk are defined as those that do not meet design and operation maintenance criteria, or.... Insert at the end: The intent of this standard is to incorporate stream crossing upgrade priorities identified from a roads analysis into project implementation, based on available funding.

Page/Column/Paragraph or
Table/Fig/Map/Photo

Change Made (bold = new; strikeout = delete)

Terrestrial Source Habitat Restoration
3-108/right/4th para*Insert new objective after Guideline R-G13:*

R-O14a. Objective. When identifying restoration opportunities for terrestrial species, evaluate the information provided on Maps 3-5 and 2-11a, and the watershed characterizations described in *A Habitat Network for Terrestrial Wildlife in the Interior Columbia Basin* (Wisdom et al. 2000a) to aid in setting priorities which complement broad-scale objectives.

3-110/Table 3-1

Add footnote: These are the source habitats (vegetation types) that have declined substantially in geographic extent from the historical to current periods for Family 1: Low elevation old forest, Family 2: All elevation old forest, and Family 4: Early-seral forest and in the Ecological Reporting Units and RAC/PAC areas where they have declined (Wisdom et. al 2000a). Objective R-O16 directs managers to increase the extent of these vegetation types.

Aquatic-Riparian-Hydrologic Restoration
3-118/left/1st para*Revise 2nd sentence:* The management intent of the ICBEMP...

(1)□securing existing habitats that support the strongest populations of wide-ranging aquatic species (**such as in A1 and A2 subwatersheds**) and the highest native diversity and integrity (~~such as in A1 and A2 subwatersheds~~); (2)□extending...

3-119/left/Objective R-O25

Revise: Use broad-scale aquatic/riparian restoration priorities and the geographic extent of the A1/A2 **subwatersheds** ~~network~~ during Subbasin Review....

Add the following at the end of this objective:

As appropriate and in accordance with Appendix 18, use the step-down process, such as Subbasin Review, to fine tune A1/A2 subwatersheds delineation to be consistent with the ICBEMP criteria and intent.

3-119/left/rationale for
Objective R-O25*Revise 1st sentence:* ...extent of the A1/A2 ~~network~~ subwatersheds...*Add the following as a second paragraph in the rationale:*

The step-down process provides the opportunity to validate and, as necessary, refine A1/A2 locations using existing finer-scale information. Minor corrections of A1/A2 delineations using A1/A2 intent and defined delineation criteria that is described later in this chapter would not constitute a new decision warranting plan amendment or associated NEPA analysis. Rather, it implements the decision in the ROD to designate A1/A2 areas meeting the criteria and intent. The recent update of information on species' status and distribution should reduce the likelihood of substantial changes within a particular subbasin (that is, adding or removing several A1/A2 subwatersheds). If such substantial shifts do occur, however, appropriate land use plan amendment and NEPA analysis procedures would be followed, as well as any necessary ESA consultation procedures (see Appendix 18).

Modifications Made to ICBEMP Supplemental Draft EIS Chapter 3 (Continued)

Page/Column/Paragraph or Table/Fig/Map/Photo	Change Made (bold = new; strikeout = delete)
3-119/left/Standard R-S7	Revise 1st bullet: ...In this instance, <i>securing</i> can mean either reducing threats within the subwatershed or reducing threats in adjacent subwatersheds that pose risks to the functionality would prevent achievement of A2 or A1 subwatershed objectives.
3-119/right/Guideline R-G23	Revise last sentence: ... riparian vegetation condition and complexity; stream aquatic stream aquatic habitat complexity; and channel structure (that is, wood and bank stability).
3-120/right/Guideline R-G28	Revise 2nd sentence: Consider vegetation management actions that would restore vegetation patches and patterns using practices that which restore and are compatible with disturbance processes and patterns that encourage attainment of aquatic/riparian/hydrologic management objectives.
3-120/right/Objective R-O30	Revise: Initiate collaboration on and cooperation Inform, coordinate with, and cooperate with other landowners when addressing similar aquatic/riparian restoration issues.
3-120/right/rationale for Objective R-O30	Insert at the end of the rationale: <i>Informing, coordinating, and cooperating</i> are the minimum required collaborative approaches. Consensus is desired, but not required. (See the Glossary definition of Collaboration for a description of these terms.)
3-121/right/1 st para	Delete 2nd complete sentence.
3-121/right/Standard R-S8	Revise: State, county, and tribal water quality restoration priorities, including the 303(d) list, state priorities for TMDL development, and existing water quality restoration plans, shall be incorporated into Subbasin Review and into Ecosystem Analysis at the Watershed Scale where EAWS is being accomplished step-down processes (programmatic planning, Subbasin Review, EAWS, and/or site-specific NEPA analysis).
3-121/right/rationale for Standard R-S8	Revise: It is intended that Subbasin Reviews will be completed for the ICBEMP within five seven years of signing of the ROD. States within the ICBEMP are developing TMDLs at a the subbasin, watershed, and subwatershed scales. Much of the area within the ICBEMP will also have EAWS Ecosystem Analysis at the Watershed Scale scheduled or completed during this same timeframe. The intent of this standard is to coordinate and integrate broad-, mid-, and watershed-scale information and timelines with state and EPA information and timelines , at similar scales of analysis, to maximize cost-benefit and efficiency of restoration efforts.
3-122/left/Standard R-S9 ["R-S79"]	Delete standard; R-S8 is modified to include specifics (TMDL priorities, 303(d) lists, etc.).
3-122/left/Objective R-O32	Revise: Develop and implement... and implementing the 303(d) protocol or an alternate analytical process agreed to by the interagency partners at a scale and with timeframes that....
3-122/left/rationale for R-O32	Revise: ...specific plans that define how such impacts will be addressed so as to restore such waters. The 303(d) protocol was designed to facilitate accomplishment of this objective. The intent...

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Table/Fig/Map/Photo

Change Made (bold = new; strikeout = delete)

Social-Economic-Tribal Component: Restoration

3-122/right/rationale for
Objective R-O34

Revise 1st sentence: ...~~sustain isolated, economically specialized communities while they transition to a less specialized condition~~ **sustain communities during transition from economically specialized to more diversified economies.**

Revise 3rd sentence: ...community vitality, and that the **belief that** the continued existence....

Revise last sentence: For more information on how Areas of Economic Specialization...

3-123/left/bullets under
Objective R-O35

Revise format as follows: (1) to support economic activity important to rural and tribal communities and local governments, (2) to maximize regional market efficiencies, and (3) to achieve management objectives in an efficient and cost effective way.

3-123/right/Objective R-O36

Revise 1st sentence: ~~Collaborate~~ **Inform and coordinate** with affected federally recognized tribes to identify restoration opportunities and possible cooperative restoration approaches or actions.

3-123/right/rationale for
Objective R-O36

Insert at the end: Informing and coordinating are the minimum required collaborative approaches. Cooperating and consensus are desired, but not required. (See the Glossary definition of Collaboration for a description of these terms.)

3-124/left/Standard R-S10

Revise 1st sentence: When conducting Subbasin Review, EAWS, or applicable site-specific NEPA analysis, ~~collaborate~~ **inform and coordinate** with affected federally recognized tribes and solicit tribally identified restoration opportunities.

3-124/left/rationale for
Standard R-S10

Insert at the end: Informing and coordinating are the minimum required collaborative approaches. Cooperating and consensus are desired, but not required. (See the Glossary definition of Collaboration for a description of these terms.)

3-124/left/Standard R-S12/
1st sentence

Revise 1st sentence: Congruent with achieving restoration objectives, ~~collaborate~~ **inform and coordinate** with federally recognized tribes to design restorative actions that mitigate possible negative effects on resources of interest to tribes.

3-124/left/rationale for
Standard R-S12

Insert at the end of the rationale: Informing and coordinating are the minimum required collaborative approaches. Cooperating and consensus are desired, but not required. (See the Glossary definition of Collaboration for a description of these terms.)

Management Direction—Terrestrial T Watersheds

3-124/right/Description
and Management Intent section/
1st three paragraphs

Delete and replace with the following:
Terrestrial T watersheds (5th-field hydrologic unit codes [HUCs]), shown on Map 3-10, are one of the components of the terrestrial strategy. T watersheds alone do not constitute a network of habitats for terrestrial species. However, they are a critical piece of the overall strategy to maintain and restore networks of habitat for terrestrial species. These areas provide a system of watersheds that provide an anchor for the recovery and viability of wide-ranging terrestrial species.

Modifications Made to ICBEMP Supplemental Draft EIS Chapter 3 (Continued)

Page/Column/Paragraph or Table/Fig/Map/Photo	Change Made (bold = new; strikeout = delete)
	<p>To have been selected, T watersheds must meet the following criteria:</p> <ol style="list-style-type: none"> 1. The watershed must contain source habitat for one or more of 5 "families" of terrestrial species (see sidebar in the Terrestrial Source Habitat Component section of the Base-level Direction), which are a subset of the 12 Terrestrial Families described in Wisdom et al. (2000). These five families represent groups of species associated with habitats that have declined substantially in geographic extent in the project area since historical times. 2. The watershed must have <i>at least 5 percent BLM- and/or Forest Service-administered lands</i> (although the overwhelming majority of watersheds selected contain more than 80 percent BLM- and/or Forest Service-administered lands). 3. The source habitats that have declined substantially in geographic extent since the historical period generally are functioning within the watershed with relatively little change compared to historical functions. In general, they would have intact functions and processes (such as plant succession), frequency and severity of disturbance (such as fire, grazing, insects, and disease), nutrient cycling, and energy flow that are characteristic for the area. 4. The pattern of source habitats within the watershed closely resembles historical vegetation patterns (that is, they have low departure, or change, from historical patterns) with certain habitat components intact (such as large snags, absence of exotic species, and low predicted road densities).
3-126/left/2 nd para	Revise: As used in the proposed decision , <i>source habitats</i> are the vegetation cover types... Source habitats as used here support long-term population persistence (Wisdom et al. 2000).
3-126/left/after 2 nd para	Insert following paragraph: While every acre of source habitat within T watersheds is not necessarily of highest quality, T source habitats can be considered the most sustainable through time compared to source habitats in other watersheds.
3-126/right/2 nd full para	Revise: Objectives and standards for T watersheds apply only to the source habitat(s) listed in Objective T-O1 that occur within the watersheds. These objectives and standards can be superseded only by direction for A1 subwatersheds take precedence over other ICBEMP direction except where inconsistent with threatened and endangered species and A1 subwatersheds direction. If there are other...
3-127/left/after rationale for Objective T-O1	Insert the following new standard and rationale: T-S1a. Standard. During Subbasin Review, T watersheds shall be validated using existing information based on the T watershed criteria. T watersheds identified using broad-scale data in the ICBEMP EIS that do not appear to meet the criteria when looking at finer-scale information shall be re-evaluated against the criteria during subsequent land use plan revision or amendment. Also

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Table/Fig/Map/Photo

Change Made (bold = new; strikeout = delete)

during Subbasin Review, other watersheds in the subbasin shall be evaluated to determine if they meet the T watershed criteria. If so, then they, too, would be further evaluated during subsequent land use plan revision or amendment.

Rationale: T watersheds were identified using broad-scale data. The use of these data to identify specific watersheds may introduce some level of error when looking at the finer scale (see Hemstrom et al. [2000] and Raphael et al. [2000] for discussion of errors associated with broad-scale data.) At the scale of individual watersheds, some of the T watersheds may not have the low level of disturbance departure anticipated when identifying them for the T watershed direction. This means that when viewed on the ground, vegetation patterns in watersheds identified as T watersheds may not be similar to historical vegetation patterns. This standard is intended to use the step-down process to systematically address potential errors in the T watershed delineation process.

3-127/right/Objective T-O2

Revise: Maintain habitats by permitting natural processes, including disturbance events, such as fire, to continue whenever these processes will contribute to ~~long-term~~ sustainability of habitat.

3-132/left/rationale for
Standard T-S2

Delete and replace with the following: Valid existing rights may limit land management agency discretion in some cases, such as in certain situations under the mining laws. This standard requires the use of existing authorities to minimize impacts of uses conducted pursuant to valid existing rights. For example, where lands are not withdrawn from mining or where valid mining claims exist in withdrawn areas, agencies may impose reasonable conditions on mining activities that are necessary to protect public resources.

Management Direction—Aquatic A1 and A2 Subwatersheds

3-132/right/1st para

Revise: To the extent possible using broad-scale data, the A1/A2 subwatersheds were identified using the following criteria based on science findings and suggestions (*Scientific Assessment*, Volume III, pages 1360-1364) and interactions between the Science Advisory Group's aquatics scientists and another group of interagency aquatic biologists. These A1/A2 subwatersheds are shown on Map 3-11a. Fine tuning of the A1/A2 subwatersheds is anticipated as more accurate, finer-scale data is used during step-down analyses to determine if subwatersheds meet the criteria and intent of the A designations. The process for future changes and updates is described in Appendix 18 in the Final EIS.

The A1 and A2 subwatersheds... differences. The similarities are... sections.

A1 and A2 subwatershed designations are based on the following criteria:

Listed species (bull trout, stream- and ocean-type chinook, and steelhead)

- ◆ Subwatersheds (6th-field HUC) must have at least 5 percent Forest Service- and/or BLM-administered lands;
- ◆ All subwatersheds (6th-field HUC) with strong populations (Note "strong" is quantifiable; see the Glossary for the definition of strongholds.)

Modifications Made to ICBEMP Supplemental Draft EIS

Chapter 3 (Continued)

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Change Made (bold = new; strikeout = delete)

- ♦ All subwatersheds in the Snake River Basin that were identified by NMFS as important for anadromous fish (NOTE: During post-ROD fine-tuning as Recovery Plans are approved, this criteria will be replaced with the following: "Population recovery units identified in approved recovery plans for listed anadromous fish by NMFS or bull trout by USFWS that meet the intent of the A system.")
 - ♦ All subwatersheds outside the Snake River Basin (that is, Mid and Upper Columbia) identified in the *Scientific Assessment* as supporting wild, native populations of steelhead and chinook salmon that have little or no influence from introduced non-indigenous stocks (See Map 4.22 in Volume III of *Scientific Assessment* page 1219).
 - ♦ Fringe populations for bull trout and ocean type chinook as identified in the *Scientific Assessment* (Volume III page 1247).
- Non listed Species (redband, westslope, Yellowstone)
- ♦ Subwatersheds (6th-field HUC) must have at least 25 percent Forest Service- and/or BLM-administered lands;
 - ♦ Fringe populations for westslope and redband as identified in the *Scientific Assessment* (Volume III page 1247).
 - ♦ All subwatersheds (6th-field HUC) with strong populations of redband trout or Yellowstone cutthroat trout (Note "strong" is quantifiable; see the Glossary for the definition.)
 - ♦ All subwatersheds (6th-field HUC) with strong populations of westslope cutthroat trout and the presence of a threatened or endangered aquatic species. (Note "strong" is quantifiable; see the Glossary for the definition.)

NOTE: The criteria for westslope cutthroat has changed from the criteria used to identify A1/A2 subwatersheds in the Supplemental Draft EIS. In summer 2000 field units were asked to validate and update the A1/A2 subwatersheds based on new information. This effort identified substantially more subwatersheds with strong populations of westslope cutthroat trout and redband trout than were identified in the *Scientific Assessment*. This increased number of A1/A2 subwatersheds for both westslope cutthroat and redband trout raised a question of priorities related to restoration efforts to meet the purpose and need of the EIS. Since the populations of westslope cutthroat and redband trout are apparently stronger than first believed, a proposal was made to change the criteria to identify A1/A2 subwatersheds for both these species. The SAG evaluated the effects of identifying as A1 or A2 for westslope or redband only those subwatersheds where the species overlap with listed aquatic species. The results of this analysis are disclosed in the Aquatic-Riparian-Hydrologic Component section of Chapter 4 in the Final EIS. The criteria for identifying A1/A2 subwatersheds for westslope cutthroat trout was changed from that used in the Supplemental Draft EIS to only those subwatersheds where strong populations of westslope cutthroat trout overlapped with listed aquatic species.

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Table/Fig/Map/Photo

Change Made (bold = new; strikeout = delete)

Although the probabilities of high habitat capacity and strong population status for westslope cutthroat trout could decline somewhat from those predicted for Alternative S2 with this decision, it was determined that this was acceptable due to the stronger existing status of westslope cutthroat trout, and the other elements of the ICBEMP aquatic-riparian-hydrologic strategy, such as RCAs, which would continue to provide habitat protection. The results of this analysis are disclosed in the Aquatic-Riparian-Hydrologic Component section of Chapter 4 in the Final EIS. The Supplemental Draft EIS criteria for redband trout was retained because focusing strictly on subwatersheds where redbands overlap with listed aquatic species would virtually exclude all populations of redband trout that do not overlap with steelhead (termed resident-interior in the Supplemental Draft EIS) and that may be genetically distinct. Furthermore, the additional emphasis from A1/A2 identification was needed.

3-133/left/1st para

Revise: *Alternative S2 Only.* Both A1 and A2 subwatersheds were delineated using broad-scale data **for the Supplemental Draft EIS.** **As was anticipated and described in the Supplemental Draft EIS,** ~~it is intended that~~ administrative units, using the criteria described **in the Supplemental Draft EIS above,** will adjusted the A1 and A2 subwatershed locations to incorporate new data. ~~prior to the signing of the ROD.~~ This effort led to the change in criteria for westslope cutthroat trout as just described. In recognition of the dynamic nature of the ecosystem, an agreed upon implementation process for post-ROD adjustments ~~will be developed before the ROD is signed,~~ **also described in the Supplemental Draft EIS,** has been developed and is included as Appendix 18.

3-133/left/before Description
and Management Intent

Insert sidebar:

As stated in the management intent (first full paragraph on page 3-133) of the Supplemental Draft EIS, the A1 and A2 subwatershed locations were validated against the criteria on page 3-132 during the summer of 2000. This resulted in some changes in subwatershed designations. This could have triggered a change in the integrated high restoration priority subbasins because the original ruleset used to determine broadscale aquatic restoration priorities used, as one component, the extent of A2 subwatersheds within a subbasin (See Appendix 15, available at www.icbemp.gov or by calling 208.334.1770). Three subbasins that were identified in the Supplemental Draft EIS would have been deleted from the integrated high restoration priority set of 40 subbasins (Alternative S2) and 4 would have been added due to the increase or decrease of subwatersheds meeting the criteria for A2 in these subbasins. The changes would have eliminated subbasins that have substantial habitat for wide-ranging threatened and endangered species (stream-type chinook, steelhead, and bull trout) and added subbasins with habitat for predominately wide-ranging, non-listed, fish species (Yellowstone cutthroat trout and redband trout). Since the focus of the project is to address broad-scale compelling issues, such as supporting recovery of listed species, the decision was made to keep the 40 high restoration priority subbasins identified in the Supplemental Draft EIS. Additionally, aquatic restoration would still be emphasized within the four subbasins because of the extent of A2 subwatersheds and their associated restoration intent.

Modifications Made to ICBEMP Supplemental Draft EIS Chapter 3 (Continued)

Page/Column/Paragraph or Table/Fig/Map/Photo	Change Made (bold = new; strikeout = delete)
3-133/right/1 st para	Revise: Management direction of A1 subwatersheds will take precedence over other management direction in the ICBEMP project area except where inconsistent with threatened and endangered species direction.
3-133/right/Standard A1-S1	Revise: New management activities (subject to valid existing rights; see Standard A1-S4) in A1 subwatersheds shall be conducted only if they maintain or achieve A1 subwatershed and aquatic/riparian/hydrologic objectives and pose very low short-term risk to aquatic, hydrologic, and riparian area functions and processes. Watershed Condition Indicators (WCIs), or the revised NMFS/USFWS matrix of pathways and indicators (see Appendix 9 in the Final EIS) until WCIs are developed, shall be linked to objectives and used to guide development and evaluate proposed activities and determine consistency consistent with the aquatic, riparian and hydrologic objectives (see Standard B-S43) and the specific intent of A1 subwatersheds. The WCIs (or matrix in the interim) shall be used as a suite of indicators. Each indicator will have value ranges defining functioning, functioning at risk, and non-functioning conditions. See the management intent, direction for WCIs, and Appendix 9 in the Final EIS for further detail.
3-136/left/rationale for Standard A1-S4	Delete and replace with the following: Valid existing rights may limit land management agency discretion in some cases, such as in certain situations under the mining laws. This standard requires the use of existing authorities to minimize impacts of uses conducted pursuant to valid existing rights. For example, where lands are not withdrawn from mining or where valid mining claims exist in withdrawn areas, agencies may impose reasonable conditions on mining activities that are necessary to protect public resources.
3-136/left/Standard A1-S3	Revise: Existing land uses, facilities, and actions within A1 subwatersheds shall be modified, discontinued, or relocated (subject to valid existing rights; see Standard A1-S4) if they prevent attainment of the A1 subwatershed and aquatic/riparian/hydrologic objectives. Watershed Condition Indicators (WCIs), or the revised NMFS/USFWS matrix of pathway and indicators (see Appendix 9 in the Final EIS) until WCIs are developed, shall be linked to objectives and used to guide development and evaluate existing land uses, facilities, and actions to determine consistency consistent with the aquatic/riparian/hydrologic aquatic, riparian and hydrologic objectives (see Standard B-S43) and the specific intent of A1 subwatersheds. The WCIs (or matrix in the interim) shall be used as a suite of indicators. Each indicator will have value ranges defining functioning, functioning at risk, and non-functioning conditions. See the management intent, direction for WCIs, and Appendix 9 in the Final EIS for further detail.
3-136/right/Objective A2-O1	Revise: Restore habitats supporting important native fish population centers where they are not fully functional while minimizing disruption to fully functioning hydrologic processes. Address immediate risks to fully functioning hydrologic, riparian, and instream processes; water quality;

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Change Made (bold = new; strikeout = delete)

and connectivity. **Design activities to restore terrestrial habitats and succession/distribution regimes (such as noxious weed control) to meet the management intent of A2 subwatersheds and to pose low short-term risk to aquatic habitats. Integrate the restoration activities as needed.** ~~Integrate needs terrestrial habitat restoration and restoration of succession/disturbance regimes (such as noxious weed control) that meet the management intent of A2 subwatersheds and that pose low short-term risk to aquatic habitats.~~

3-137/left/rationale for
Objective A2-O2

Revise 3rd sentence: "Wildland fire use for resource benefit" and prescribed fire **(as well as associated mechanical treatments preceding use of prescribed fire)** ~~both~~ require extensive planning and documentation and must meet NEPA and agency requirements.

3-137/left/Standard A2-S1

Revise: New management activities (subject to valid existing rights; see Standard A2-S4) in A2 subwatersheds shall be conducted only if they maintain or achieve A2 subwatershed and aquatic/riparian/hydrologic objectives and pose low short-term risk to aquatic, hydrologic, and riparian area functions and processes. Watershed Condition Indicators (WCIs) **or the revised NMFS/USFWS matrix of pathways and indicators (see Appendix 9 in the Final EIS) until WCIs are developed shall be linked to objectives and used to guide development and evaluate proposed activities and determine consistency consistent** with the aquatic, riparian and hydrologic objectives (see Standard B-S43) and the specific intent of A2 subwatersheds. **The WCIs (or matrix in the interim) shall be used as a suite of indicators. Each indicator will have value ranges defining functioning, functioning at risk, and non-functioning conditions.** See the management intent, direction for WCIs, and **Appendix 9 in the Final EIS** for further detail.

3-137/left/Standard A2-S3

Revise: Existing land uses, facilities, and actions within A2 subwatersheds shall be modified, discontinued, or relocated (subject to valid existing rights; see Standard A2-S4) if they prevent attainment of the A2 subwatershed and aquatic/riparian/hydrologic objectives. Watershed Condition Indicators (WCIs), **or the revised NMFS/USFWS matrix of pathways and indicators (see Appendix 9 in the Final EIS) until WCIs are developed, shall be linked to objectives and used to guide development and evaluate existing land uses, facilities, and actions and determine consistency consistent** with the aquatic, riparian and hydrologic objectives (see Standard B-S43) and the specific intent of A2 subwatersheds. **The WCIs (or matrix in the interim) shall be used as a suite of indicators. Each indicator will have value ranges defining functioning, functioning at risk, and non-functioning conditions.** See the management intent, direction for WCIs, and **Appendix 9 in the Final EIS** for further detail.

3-137/left/rationale for
Standard A2-S4

Delete and replace with the following: Valid existing rights may limit land management agency discretion in some cases, such as in certain situations under the mining laws. This standard requires the use of existing authorities to minimize impacts of uses conducted pursuant to valid existing rights. For example, where lands are not withdrawn from mining or where valid mining claims exist in withdrawn areas, agencies may impose reasonable conditions on mining activities that are necessary to protect public resources.








Map 3-11a.
Aquatics (A1 and A2) Subwatersheds:
Alternative S2

*BLM- and Forest Service-
Administered Lands Only*

INTERIOR COLUMBIA
BASIN ECOSYSTEM
MANAGEMENT PROJECT

Final EIS
2000

- | | | | |
|---|------------------|---|----------------------|
|  | A1 Subwatersheds |  | Subbasin Borders |
|  | A2 Subwatersheds |  | Major Roads |
| | |  | Planning Area Border |

Chapter 4

Environmental

Consequences

Chapter 4 of the Supplemental Draft EIS is incorporated by reference, in accordance with 40 CFR 1500.4(j) and (o), 1502.21 and 1506.4. The incorporated material can be found on pages 4-1 through 4-212 in Volume 1 of the Supplemental Draft EIS. The content is briefly summarized below, with changes based on public comment and internal review following the summary.

Summary

Environmental Consequences

The following section summarizes the key effects of the alternatives on various elements of the ecosystem.

Physical Setting

Over the long term, Alternative S2 would maintain and restore soil productivity, hydrologic functions, and watershed processes better than Alternative S3, followed by Alternative S1. Alternative S2 would also maintain riparian ecological functions better than Alternatives S3 and S1. Alternative S1 would have the greatest adverse effects on air quality because of smoke from large wildfires. Prescribed fire activity

under Alternatives S2 and S3 would generate more frequent but lesser amounts of smoke in the short term and would have lower total air quality impact in both the long and the short term than Alternative S1.

Soil Functions and Processes, Including Soil Productivity

- ♦ The majority of Forest Service- and BLM-administered lands would be in the low and very low soil disturbance category for all alternatives over the next 100 years. Long-term soil productivity would not decrease from implementing any of the alternatives.
- ♦ Activities in the high restoration priority sub-basins for Alternatives S2 and S3 are predicted to cause a slight change of land from none, very low, or low soil disturbance to moderate levels. This would not decrease long-term soil productivity because restoration activities are designed to resemble soil disturbance effects that would be expected under natural disturbance processes.
- ♦ In the high restoration priority subbasins, reductions in negative effects from uncharacteristic wildfire and livestock grazing would benefit soil productivity over the next 100 years.

- ♦ Snags and large downed wood are key components in maintaining and restoring soil functions and providing for soil productivity over the long term. Alternative S2 places the most emphasis on increasing snags for the long term. The amount of large downed wood is currently greater than historical levels on most forested lands and would increase under all alternatives. Alternative S2 is predicted to be slightly more effective than Alternatives S3 and S1 in using prescribed fire to manage for desirable concentrations of large downed wood.
- ♦ Over the next 100 years, Alternative S2 would provide more maintenance and restoration of soil productivity than either Alternative S3 or Alternative S1 because of its reduced rate of departure (change) from the historical range of variability (HRV).
- ♦ Predicted decreases in road-related adverse effects would benefit long-term recovery of soil productivity by re-establishing soil functions and processes. Benefits to soil productivity would be highest under the intensive restoration emphasis of Alternative S2, followed by Alternative S3 then Alternative S1.

Hydrology and Watershed Processes

- ♦ Alternative S2 would maintain or slightly restore (improve) hydrologic functions and watershed processes more than Alternative S3 as a result of activities to decrease the rate of HRV departure (change from the historical range of variability). Activities in Alternative S1 are not expected to decrease the rate of HRV departure; therefore, trends for hydrologic function and watershed processes are predicted to gradually decline over the long term.
- ♦ Alternative S2 would reduce adverse effects from uncharacteristic wildfire slightly better than Alternative S3, and would provide higher protection and maintenance of hydrologic function and watershed processes. The management approach to wildfire in Alternative S1 would do little to protect and maintain hydrologic function and watershed processes.
- ♦ Changes in vegetation (for example, plant species changes, and changes from grasses to shrubs) and soils (for example, soil surface characteristics) caused by livestock grazing would trend back

toward historical conditions the strongest in Alternative S2. The trend would be slightly less strong in Alternative S3. These trends would lead to increased maintenance and restoration of hydrologic function and watershed processes. With regard to effects from livestock grazing, Alternative S1 would provide fewer improvements to hydrologic function and watershed processes compared to Alternatives S2 and S3.

- ♦ Road density trends for Alternative S1 are not estimated to change in the long term. The restoration emphasis of Alternatives S2 and S3 would result in fewer roads than Alternative S1. Decreases in adverse road effects with short- and long-term benefits to hydrologic function and watershed processes would be highest for Alternative S2, then Alternative S3 and Alternative S1, respectively.
- ♦ Greater levels of landscape restoration would occur in the high restoration priority subbasins in Alternatives S2 and S3. Activities would contribute to the restoration of integrated ecological processes. Activities such as those planned under the restoration strategy in Alternatives S2 and S3 are more likely to be successful in protection, maintenance, and restoration of watershed processes at the broad scale as compared to Alternative S1.
- ♦ Alternative S2 would maintain riparian ecological processes through time and would contribute most to protecting, maintaining, or restoring watershed processes and hydrologic function, compared to Alternatives S3 and S1.
- ♦ The higher rate and frequency of step-down analysis under Alternatives S2 would be more likely than Alternatives S3 and S1 to protect and restore hydrologic function and watershed processes, because of the use of a hierarchical and integrated landscape approach.

Air Quality

- ♦ The dispersion modeling analysis indicates that there may be significantly greater impacts on the National Ambient Air Quality Standards (NAAQS) from wildfires than from prescribed burning under any alternative.
- ♦ Modeling prescribed burning emissions suggests that at a coarse scale (20 km [12.5 mile] and 4 km [2.5 mile] grids) NAAQS would not be violated

(averaged across the 20 km grid) under any alternative. However, compliance with the NAAQS at a local level must be evaluated at subsequent planning levels to assure they are not violated.

- ♦ Increased short-term haziness (a reduction in viewing distance and ability to detect finer features on the landscape) would likely result from the increased use of prescribed burning in Alternatives S2 and S3. It can be inferred that because of higher concentrations of emissions associated with wildfires, the magnitude of visibility impairment from wildfires under Alternative S1 would be greater than the highest levels of prescribed fire used in Alternatives S2 and S3. However, more frequent lower visibility impacts can be expected from prescribed fire than wildfire.
- ♦ Other criteria pollutants produced from prescribed fire under any alternative are not likely to have an impact on public health because of the small levels produced, distances to populated areas, and the rapid dilution or modification of these substances within relatively short time frames.
- ♦ Alternatives S2 and S3 would allow more opportunity than Alternative S1 to reduce fuel accumulations across the landscape, lessening the adverse effects from wildfire.

Succession/Disturbance

- ♦ Compared to Alternatives S1 and S3, Alternative S2 is expected to better repattern vegetation to provide a proper mix of habitats so that vegetation would be sustainable and more resilient to disturbance in the long term.
- ♦ Adverse effects from uncharacteristic wildfire are expected to increase slightly under Alternative S1 and decrease in Alternatives S2 and S3, with Alternative S2 slightly better on Forest Service- and BLM-administered lands in the long term.
- ♦ Uncharacteristic insect and disease effects are expected to remain near current levels on Forest Service- and BLM-administered lands in the long term. Alternative S2 should be slightly better than Alternatives S3 and S1, respectively.
- ♦ The higher concentration of restoration activities in high restoration priority subbasins is expected to lead to a more healthy landscape in those areas under Alternatives S2 and S3.

Vegetation Composition and Structure

- ♦ Alternative S2 is expected to increase the geographic extent of old forests to near historical levels slightly more than Alternative S3, followed by Alternative S1 on Forest Service- and BLM-administered lands in the long term.
- ♦ Alternative S2 is expected to increase the geographic extent of single story old forests more than Alternative S3. Both are expected to fall short of historical levels. Alternative S1 would also increase the extent but fall far short of historical levels on Forest Service- and BLM-administered lands in the long term.
- ♦ All alternatives are expected to increase geographic extent of ponderosa pine (which is desired). Alternatives S2 and S3 would increase extent to near historical levels, while Alternative S1 would result in above historical levels (go too far). Alternatives S2 and S3 would do a better job of increasing the extent of vegetation types that have declined substantially from historical to current periods within this cover type.
- ♦ Alternatives S2 and S3 are expected to increase the extent of western white pine to slightly below historical levels. Alternative S1 would result in levels lower than Alternatives S2 and S3.
- ♦ All alternatives are expected to increase the geographic extent of whitebark pine (which is desired), but none would be able to prevent the future decline of the late seral single story structure.
- ♦ Over the long term, all three alternatives are projected to reverse the major vegetation changes within the woodland and cool shrub potential vegetation groups (that is, woody species encroachment and increasing density in shrublands and/or herblands) on BLM- and Forest Service-administered lands. Reversal (which is desired) would be more pronounced in Alternatives S2 and S3 than in Alternative S1.
- ♦ Under all alternatives, vegetation types that have declined substantially in geographic extent from historical to current periods in the project area (for example, mountain big sagebrush, fescue-bunchgrass, and wheatgrass bunchgrass) would increase in the woodland and cool shrub potential vegetation groups as a result of the

reversal in trend for encroachment of woody species.

- ♦ The rate of expansion of noxious weeds and other exotic undesirable plants on BLM- and Forest Service-administered lands in the project area would be slowed more in Alternatives S2 and S3 than in Alternative S1. However, for all alternatives the extent of noxious weeds and other exotic undesirable plants would continue to increase from current projected levels.
- ♦ The wheatgrass-bunchgrass and fescue-bunchgrass vegetation types within the dry grass potential vegetation group, and the big sagebrush vegetation type within the dry shrub potential vegetation group, all of which have declined substantially in geographic extent from historical to current periods, would continue to decline and trend away from historical amounts.

Terrestrial Species

In general, Alternatives S2 and S3 would be more beneficial to plants and terrestrial invertebrates than would Alternative S1. In general, Alternative S2 would result in better conditions for terrestrial vertebrates on BLM- and Forest Service-administered lands than Alternatives S3 and S1, respectively. Differences among alternatives would be smaller when looking at all lands because of the higher proportion of human effects on private lands. Relative to the differences among alternatives, most of the species in the following groups would see improved conditions compared to current conditions: old-forest species, riparian species, and species that use habitats that have declined substantially in geographic extent from historical to current periods. Conditions for rangeland species are expected to be stable or declining because of a lack of restoration technology and available resources for active restoration. Within high restoration priority subbasins, the differences among alternatives would be greater. In the long term, passive management would have adverse effects on some terrestrial species and management actions to benefit one species could harm another.

Plants

- ♦ Plant species in all major plant groups would remain stable in their likelihood of persistence under Alternatives S2 and S3 relative to current

conditions. In contrast, plant species in all major plant groups would have a reduced likelihood of persistence under Alternative S1 relative to current conditions.

- ♦ All alternatives would promote development and maintenance of biological crusts. Alternatives S2 and S3 would provide more restoration focus on biological crusts than Alternative S1.

Terrestrial Invertebrates

- ♦ Alternatives S2 and S3 should provide more general benefits to invertebrates than would Alternative S1.

Broad-scale Terrestrial Vertebrates

- ♦ Generally, substantial differences among the alternatives are not evident for broad-scale terrestrial vertebrates.
- ♦ Habitat for terrestrial species dependent on old-forest conditions would generally increase from current levels under all alternatives, sometimes approaching historical levels.
- ♦ Habitat for terrestrial species that use multiple vegetation types would generally remain stable at current levels under all alternatives.
- ♦ Habitat for terrestrial species dependent on shrublands or grasslands would generally decrease from current levels under all alternatives.
- ♦ Habitat conditions among species would generally be better on Forest Service-or BLM-administered lands compared to all lands under all alternatives.
- ♦ Management of ecosystems, such as in Alternatives S2 and S3, is more effective for maintaining a diverse array of species than optimizing conditions for a single species. For example, most Terrestrial Families have at least one species with reduced habitat capability, so an action to benefit one species could adversely affect another species.

Terrestrial Riparian and Wetland Species

- ♦ For riparian- or wetland-dependent terrestrial vertebrates, Alternative S2 would provide general improved results compared to Alternatives S3, which would have slightly improved results compared to Alternative S1.

Special Status Terrestrial Species

- ♦ Woodland caribou, gray wolf, and grizzly bear would trend toward recovery within recovery areas under Alternatives S2 and S3, and to a lesser extent under Alternative S1. Basin-wide conditions would remain greatly reduced from historical conditions for gray wolf and grizzly bear under all alternatives.
- ♦ Lynx were listed as threatened by the U.S. Fish and Wildlife Service in March 2000. Alternatives S2 and S3 would provide additional requirements through plan amendment to conserve lynx, restore lynx habitat, and promote lynx recovery compared to Alternative S1.

Aquatic-Riparian-Hydrologic Component

The largest increase in aquatic habitat capacity would come from Alternative S2, followed by Alternative S1 and then Alternative S3. Alternative S2 would maintain or improve riparian ecological processes, while Alternative S1 would likely maintain them and Alternative S3 would contain more uncertainty. Water quality effects can be thought of as indicators of the upland physical and biological processes. For example, high water quality generally suggests that these processes are on an improving trend and are characteristic of historical succession and disturbance regimes. Aquatic habitat on BLM- and Forest Service-administered lands is vital to native fish populations, but other factors are also important, such as effects from harvest, dams that restrict fish migrations, nonnative aquatic species, and human activities and habitat conditions on private lands.

Aquatic and Riparian Habitats

- ♦ In the long term, all three alternatives are projected to improve aquatic habitat conditions on BLM- and Forest Service-administered lands compared to projections of current conditions. The largest increase in aquatic habitat capacity would occur under Alternative S2, the smallest increase under Alternative S3.
- ♦ Alternative S2 would maintain and improve riparian ecological processes through time, based on the interim RCA delineation criteria. Some uncertainty is associated with the other two alternatives, where one-half site potential

tree height is used as an interim RCA delineation criterion.

Water Quality

- ♦ In the long term (100 years) all three alternatives are predicted to improve water quality conditions on BLM- and Forest Service-administered lands compared to current conditions.
- ♦ Alternative S2 is predicted to have the most positive influence on water quality, while Alternative S3 is predicted to result in the least improvement.

Aquatic Species

- ♦ All alternatives are expected to result in improved population status and habitat capacity for the six key salmonids over the long term. Predicted changes in population status reflect less improvement than does habitat capacity because of other biological constraints on a population's response (for example, exotic species and migratory corridor survival) and uncertainty in the analysis. Overall, Alternative S2 is expected to result in the most improvement for these six species. Alternative S3 is expected to result in the least improvement when compared to the other two alternatives.
- ♦ Other factors beyond Forest Service or BLM management authority may limit the response of aquatic species to habitat conservation and restoration on federal lands. These factors include condition of non-federal habitat and non-native fish species. It is assumed that habitat conditions on non-federal lands would remain stable or would slightly improve over the long term.
- ♦ Although stream-type chinook and steelhead habitat capacity would substantially improve under all alternatives, population status outcomes reflect little to no improvement. Population status outcomes reflect the assumptions regarding biological constraints which influence survival throughout their life cycle. The greatest uncertainty is associated with migration corridor survival, especially for populations above several dams in the Snake River and Upper Columbia River. Management of habitat on Forest Service- and BLM-administered lands is expected to play a

major but not exclusive role in the future status of the species. Rehabilitation of depressed populations above several dams cannot be accomplished via federal habitat improvement alone but will require improvements in migration corridor survival and efforts to address causes of mortality in other life stages. However, securing and restoring federal freshwater habitat may be critical to the short-term persistence of many anadromous populations. Trends in improving habitat and strong population status associated with Alternative S2 were slightly greater than those in Alternatives S1 and S3; thus, Alternative S2 is expected to result in more favorable conditions supporting the persistence of anadromous fish.

Social-Economic-Tribal Component

The effects analysis on biophysical resources differs from the socio-economic effects analysis in that most of the biophysical analysis focuses on the long term (100 years) while the socio-economic analysis is more concerned with the short term (10 years). One main priority of Alternatives S2 and S3 is restoration of ecosystems and watersheds. Along with ecological benefits, restoration activities also make an important human contribution through generating employment and economic activities. Livestock grazing on BLM- and Forest Service- administered lands and the number of related jobs are expected to decline the most under Alternative S2, followed by Alternative S3, as a result of rangeland management objectives. Conversely, first-decade increases in timber volume, forest and rangeland restoration activities, and related jobs are expected to be slightly higher under Alternative S2 than Alternative S3. Alternative S1 is expected to keep livestock grazing, timber volumes, restoration, and jobs related to federal land outputs near current levels. No broad-scale changes were predicted for levels of recreation and related jobs. In general, economic and social effects at the broad scale would be small. However, this may not be true for geographically isolated communities whose economies are specialized in sectors that depend on outputs from federal lands. In these places, adverse economic and social effects would likely be greater if the levels of outputs and activities from BLM- and Forest Service-administered lands decline. Overall, Alternative S2 would be best for tribal rights and interests, with Alternative S3 next and Alternative S1 last.

Social and Economic Considerations

Products and Services

- ♦ Timber harvest levels in the first decade are projected to increase at both the basin level and by all RAC/PAC areas under Alternative S2 and Alternative S3, compared to Alternative S1. Estimated increases would be just over 21 percent for Alternative S2 and just under 21 percent for Alternative S3. Harvest level increases would come primarily from commercial thinning and other harvest activity designed to promote ecosystem and forest stand restoration (stewardship harvest). While harvest levels would increase in Alternatives S2 and S3, the size and quality of logs produced would decrease because of the stand restoration objectives guiding the thinning and harvest activities.
- ♦ Model projections indicate domestic livestock use of forage, as measured by animal unit months (AUMs), could decline basin-wide and by all RAC/PAC areas (with one minor exception), in the first decade under Alternative S2 (10 percent) and Alternative S3 (11 percent), compared to Alternative S1. Reductions in AUMs could result indirectly from watershed and rangeland protection and restoration, and directly from the continued historical trend of a decrease in the livestock industry in the basin from other social, cultural and economic factors.
- ♦ Forest/woodland restoration activity (pre-commercial thinning and planting), would increase by 40 percent for Alternative S2 and 36 percent for Alternative S3, compared to Alternative S1. There would be a modest increase in rangeland restoration and maintenance: nine percent for Alternative S2 and four percent for Alternative S3. With the focus on reducing forest and range susceptibility to uncharacteristic wildfire, and wildfire threats in the urban-rural-wildland interface areas, there would be large increases in acres treated by prescribed fire and fuels management in the first decade compared to Alternative S1: seven-fold for Alternative S2 and five-fold for Alternative S3.

Jobs and Employment

- ♦ Given the broad scale and refined focus of this EIS, there are no projected changes in recreation use among the alternatives. Therefore, there are no expected changes in recreation-related employment among alternatives.
- ♦ Impacts on total basin-wide employment would be negligible—an increase of less than 0.03 percent of jobs in the first decade. However, local impacts, both positive and negative, could be much more significant, particularly for rural and tribal communities that are isolated and economically specialized in economic sectors dependent on goods and services from Forest Service- and BLM-administered lands.
- ♦ Average annual direct employment associated with Forest Service- and BLM-administered lands would increase by about 3,900 jobs for Alternative S2 and by a little over 3,100 jobs for Alternative S3, compared to Alternative S1. About 35 to 40 percent of the increase would be associated with stewardship timber harvest, and 60 to 65 percent associated with prescribed fire and fuels management. An increase of about 100 jobs per year in forest and rangeland restoration jobs would be off-set by a possible decrease in grazing-related jobs.

Communities

- ♦ Specific effects of the alternatives on local communities or other areas smaller than RAC/PAC areas (county, subbasin, community) cannot be measured directly because of the broad-scale nature of this analysis. However, it is likely that isolated and economically specialized communities would be more affected by changes in output and activity levels than communities that are not isolated or economically specialized. And it is likely that, where projected changes within a RAC/PAC area are greater, those communities in counties with higher socio-economic resiliency would likely tend to manage change more readily than similar communities in counties where socio-economic resiliency is low.
- ♦ Under the action alternatives, restoration activity in the first decade would be focused on high restoration priority subbasins (which include a component that is responsive to community

economic need). Within those subbasins, activities would be first concentrated as near as possible to those isolated and economically specialized communities that are in greatest need of economic stimulus. Alternative S2 would have more acres of restoration and prescribed fire/fuels management work scheduled per year than would Alternative S3. In addition, the work in Alternative S2 would initially be concentrated in 40 high restoration priority subbasins, compared to 51 high restoration priority subbasins in Alternative S3. Therefore, it is expected that the direct community effects in high restoration priority subbasins would be greater under Alternative S2 than under Alternative S3 because more acres would be treated across a smaller area.

- ♦ Each of the three alternatives has a certain degree of uncertainty and unpredictability associated with it. The non-traditional broad-scale outcome-based objectives and standards in Alternatives S2 and S3—designed to achieve restoration and maintenance of sustainable ecosystems—have not been operationally tested at this scale before; therefore, there is uncertainty about the projected levels of goods and services and effectiveness of the proposed restoration activities. On the other hand, Alternative S1, with its continuation of varying management direction across the basin and no systematic requirements for hierarchical ecosystem analysis (Subbasin Review or EAWS) also faces uncertainty in implementation. Project-by-project and area-by-area consultation and mitigation requirements for protection of species listed under the Endangered Species Act (ESA), would continue without broader scale context. Thus, for Alternative S1, the individual mitigation requirements may be more varied, and more restrictive in total, than the management direction; A1, A2, and T designations; and restoration focus of Alternatives S2 and S3.

Federal Trust Responsibility and Tribal Rights and Interests

- ♦ Generally, Alternatives S2 and S3 would provide the best approach to appropriate government-to-government consultation because of more consistent consultation direction.

- ♦ Alternatives S2 and S3 would provide more opportunities for tribal involvement in both planning and decision-making processes than Alternative S1. Alternative S2, with a greater emphasis on step-down analyses, would provide more opportunities for tribal involvement in planning processes than Alternative S3 or Alternative S1. While Alternative S3's increased emphasis on restoration actions near reservations and tribal communities may provide for greater consultation opportunities in project decision-making, the difference is negligible since Alternative S2 would have more restorative actions overall. Therefore, Alternative S2 would likely provide more opportunities for tribal consultation and involvement than Alternatives S1 or S3.
- ♦ Alternative S2 appears to be most responsive to honoring the federal trust responsibility and consideration of tribal rights and interests because it would provide more upfront direction (processes and prescriptions) and therefore better certainty to tribes of consistent and accountable implementation.
- ♦ Alternatives S2 and S3 both would respond better than Alternative S1 to protection and/or restoration of identified species of interest to tribes, with Alternative S2 being somewhat more responsive than Alternative S3.
- ♦ Alternatives S2 and S3, because of their broad-scale landscape, terrestrial, aquatic, economic, and restoration strategies, appear most responsive to the restoration of ecological processes as well as consideration of tribal resource concerns. Alternative S3 would provide a better response than Alternative S2 to some social and economic concerns by emphasizing more high restoration priority subbasins that are also high priority tribal restoration subbasins. However, Alternative S2, with a higher rate and intensity of restoration and more analysis to target restoration at lower scales, is predicted to be more responsive than Alternative S1 and somewhat more responsive than Alternative S3 in addressing most social and biophysical concerns.

Modifications Made to ICBEMP Supplemental Draft EIS Chapter 4

Page/Column/Paragraph or
Table/Fig/Map/Photo

Change Made (bold = new; strikeout = delete)

Introduction

4-10/right

Insert after last paragraph:

Effects from Revision of Supplemental Draft EIS Alternative S2

The Science Advisory Group (SAG) reviewed the revisions to Alternative S2 for the Final EIS and determined there were enough changes to the EIS to change the effects from what they predicted for the Supplemental Draft EIS. The SAG determined there would be only very small differences in the effects, except for those related to the revised A1/A2 subwatershed criteria. They estimated that although the A1/A2-related effects would be somewhat different from what was predicted for the Supplemental Draft EIS, they would still be within the range of effects projected in the *Draft SAG Effects Analysis for the SDEIS Alternatives* (Quigley 2000). The predicted effects from the changes in the A1/A2 subwatershed criteria are included in the Landscape Dynamics Component: Terrestrial (Upland) Vegetation, Terrestrial Species Component, Aquatic-Riparian-Hydrologic Component, and Social-Economic-Tribal Component sections of this chapter.

Landscape Dynamics Component: Physical Setting

4-37/right/last para/
3rd to last line

Revise: ~~smoke management plan submitted for approval (as a component of the State Smoke Implementation Plan)~~ **state implementation plan for visibility.**

Landscape Dynamics Component: Terrestrial (Upland) Vegetation

4-49/Map 4-4

Revise Map 4-4, "Wildland Fire Use for Resource Benefit" Activity Classes. The Washington and Oregon portion of the map were unintentionally left blank in the Supplemental Draft EIS. (The revised map is at the end of Chapter 4.)

4-53/left

Insert after Effects of the Alternatives on Potential Vegetation Groups title:

As described in Chapter 3 of the Final EIS, a validation exercise related to the A1/A2 subwatersheds was undertaken following the release of the Supplemental Draft EIS. The intent to do that validation is described in Chapter 3 of the Supplemental Draft EIS, on page 3-133. The validation exercise increased the number of subwatersheds that meet the criteria in the Supplemental Draft EIS for designation as A1 and A2 subwatersheds, especially for those subwatersheds related specifically to westslope cutthroat trout and redband trout. After the validation exercise, the Executive Steering Committee decided to modify the criteria for identification of A1/A2 subwatersheds related to

Modifications Made to ICBEMP Supplemental Draft EIS Chapter 4 (Continued)

Page/Column/Paragraph or
Table/Fig/Map/Photo

Change Made (bold = new; strikeout = delete)

westslope cutthroat trout. The validation exercise and changes in criteria for westslope cutthroat trout resulted in an increase in the total acreage of subwatersheds that meet the revised A1/A2 criteria by approximately 268,000 acres (2.0 percent more than the original acreage under Alternative S2).

The Science Advisory Group evaluated the effects of the changes in A1/A2 subwatersheds resulting from the validation exercise and the change in criteria on broad-scale landscape components. Although some effects have changed slightly, they remain within the range of effects that are discussed in the Supplemental Draft EIS. The results of the SAG evaluation indicates there should be no ecologically significant effects on landscape attributes on Forest Service- and BLM-administered lands at the broad scale nor on forests or range-lands compared to those presented in the Supplemental Draft EIS for Alternative S2. There may be local effects as a result of the shifting locations of A1/A2 subwatersheds that are not ecologically significant at the broad scale. These can be addressed at finer scales during step-down analysis. This is particularly relevant in south central Oregon and the Blue Mountains.

Terrestrial Species Component

4-84/viability sidebar/last para/
1st sentence

Revise: The regulation also makes it clear that viability is a requirement of the federal landscape ~~(that is, the planning area)~~ **on Forest Service-administered lands within the planning area.**

4-85/left

Insert after Effects of the Alternatives on Terrestrial Vertebrates title:
As described in Chapter 3 of the Final EIS, a validation exercise related to the A1/A2 subwatersheds was undertaken following the release of the Supplemental Draft EIS. The intent to do that validation is described in Chapter 3 of the Supplemental Draft EIS, on page 3-133. The validation exercise increased the number of subwatersheds that meet the criteria in the Supplemental Draft EIS for designation as A1 and A2 subwatersheds, especially for those subwatersheds related specifically to westslope cutthroat trout and redband trout. After the validation exercise, the Executive Steering Committee decided to modify the criteria for identification of A1/A2 subwatersheds related to westslope cutthroat trout. The validation exercise and changes in criteria for westslope cutthroat trout resulted in an increase in the total acreage of subwatersheds that meet the revised A1/A2 criteria by approximately 268,000 acres (2.0 percent more than the original acreage under Alternative S2).

The Science Advisory Group evaluated the effects of the changes in A1/A2 subwatersheds resulting from the validation exercise and the change in criteria on broad-scale terrestrial species. Although some effects have changed slightly, they remain within the range of effects

Page/Column/Paragraph or
Table/Fig/Map/Photo

Change Made (bold = new; strikeout = delete)

that are discussed in the Supplemental Draft EIS. The results of the SAG evaluation are as follows.

The SAG found no evidence to suggest that effects on plants of conservation concern would be different from those presented in the Supplemental Draft EIS for Alternative S2 (Croft and Owen 2000).

The SAG found no evidence of changes in environmental outcomes on Forest Service- and BLM-administered lands compared to those projected for any of the 31 species-seasonal combinations that were initially analyzed by Raphael et al. (2000). The shifting locations of A1/A2 subwatersheds will likely result in local (fine-scale) increases and decreases in habitat conditions for terrestrial species whose ranges include affected subwatersheds.

The SAG found no evidence that effects on mule deer, white-tailed deer, or elk would change from the model predictions of effects for Supplemental Draft EIS Alternative S2 at the scale of the RAC/PAC areas.

The SAG found no evidence that there would be a change in overall riparian and wetland conditions for associated vertebrates at the broad scale compared to those disclosed for Alternative S2. At finer scales, such as for subwatersheds, shifts in the quality of terrestrial riparian habitats would be expected to be proportionate to the shift in subwatersheds designated as part of the A1/A2 system.

4-85/right

Insert sidebar after Rangeland Habitat title:

It is possible that the environmental and population outcomes that were projected as C, D, or E for broad-scale terrestrial vertebrates could be improved through further management direction at the broad scale. One approach that could improve outcomes is the designation of a spatially explicit network of habitats (Wisdom et al. 2000a). This direction could have improved local conditions for many species with C, D, or E outcomes and would complement additional direction that could be developed at the broad scale. The risks associated with not implementing broad-scale direction for a habitat network are identified accurately in the outcomes projected for the three alternatives in Table 4-26, and in the general description of effects on terrestrial vertebrates in Chapter 4.

4-91/ right/last para/1st sentence

Revise: ... except for woodland caribou, lynx and wolverine **and only with Alternative S1 Lewis' woodpecker (migrant)** because of the improving environmental outcomes, ...

4-91/right/1st full para/
last sentence

Add to end of sentence: The outcome levels would be either "A" "B" or "C" **(except for Lewis' Woodpecker under Alternative S1).**

4-91/right/ last para/

Revise: ...for wolverine because of small population size and disturbance near denning sites, **and for Lewis' woodpecker with Alternative S1 due to the persistence of low habitat capacity.**

Modifications Made to ICBEMP Supplemental Draft EIS Chapter 4 (Continued)

Page/Column/Paragraph or
Table/Fig/Map/Photo

Change Made (bold = new; strikeout = delete)

4-93/Table 4-24

Revise: grasshopper sparrow:

Alt. S1 (~~55 58~~) Alt. S2 (~~0 1~~) (~~59-61~~) Alt. S3 (~~0 1~~) (~~58 60~~)

4-94/Table 4-25

Revise: northern goshawk (summer): Cumulative All Lands

Current (~~-44-40~~) Alt. S1 (~~66 69~~) Alt. S2 (~~70 74~~) Alt. S3 (~~70 73~~)

Revise: hoary bat: Cumulative All Lands

Current (~~52 46~~) Alt. S1 (~~56 59~~) Alt. S2 (~~59 63~~) Alt. S3 (~~59 62~~)

Revise: grasshopper sparrow: FS/BLM Lands

Alt. S1 (~~14-19~~) Alt. S2 (~~15 22~~) Alt. S3 (~~15 21~~)

Revise: grasshopper sparrow: Cumulative All Lands

Alt. S1 (~~10-14~~) Alt. S2 (~~11 16~~) Alt. S3 (~~10-15~~)

4-95/Table 4-26

Revise: Lewis' woodpecker: FS/BLM Lands Alt. S1 (~~0 D~~)

Revise: Lewis' woodpecker: Cumulative All Lands

Alt. S1 (~~0-D~~) Alt. S2 (~~0 D~~) Alt. S3 (~~0 D~~)

Revise: hoary bat: Cumulative All Lands

Current (C) Alt. S1 (C) Alt. S2 (~~0 B~~) Alt. S3 (~~0 B~~)

Revise: grasshopper sparrow: FS/BLM Lands

Current (D) Alt. S1 (E) Alt. S2 (~~E D~~) Alt. S3 (~~E D~~)

4-97/right/2nd full para

Revise: ...from current with Alternative S1. **The reduction in source habitat for grasshopper sparrow is related to a continuing, substantial loss of grassland or savannah habitat to tree encroachment.**

4-98

Add as sidebar:

The Science Advisory Group (SAG) modeled two restoration scenarios that build on Alternative S2. These scenarios were designed to assess whether outcomes modeled for the *SAG Effects Analysis for the SDEIS Alternatives* (Quigley et al. 2000) could be improved for sage grouse and Columbian sharp-tailed grouse habitats and populations. Results of these analyses are summarized in *Shrub Steppe Source Habitat Transitions and Potentials for Future Restoration in the Interior Columbia River Basin* (Hemstrom et al. 2000a) and *Modeled Effects of Shrub-steppe Restoration on Sage Grouse and Columbian Sharp-tailed Grouse* (Wisdom et al. 2000b). The two restoration scenarios involved the following changes in rangeland effects and management in relation to those modeled for Alternative S2: scenario (1) decreasing detrimental livestock grazing effects by approximately 50 percent and increasing active restoration of rangeland habitats by approximately 30 percent; and scenario (2) decreasing detrimental livestock grazing effects by approximately 100 percent and increasing active restoration of rangeland habitats by approximately 30 percent. These scenarios were assessed for Forest Service- and BLM-administered lands only, and were limited to portions of areas within the historical ranges of sage

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Table/Fig/Map/Photo

Change Made (bold = new; strikeout = delete)

grouse and Columbian sharp-tailed grouse, as opposed to assessing basin-wide changes. Similar rangeland restoration options are discussed in the Supplemental Draft EIS (Chapter 4, pages 100-101).

One option mentioned in the Supplemental Draft EIS is to increase funding for additional active restoration. However, it is noted that the amount of funding available to accomplish restoration objectives is limited to a "reasonable amount." Two other options mentioned in the EIS are that detrimental effects of livestock grazing could be reduced through changing livestock management strategies, which may include reducing livestock stocking rates. It is concluded in the Supplemental Draft EIS that the direction in Alternative S2 sets the sideboards of what needs to be achieved, but that specific management strategies to achieve the objectives would need to be developed and analyzed at finer scales.

Livestock stocking levels or authorized AUMs are not prescribed in the ICBEMP EIS, because those decisions require finer-scale analyses. However, the SAG predicted that Alternative S2 would result in a 10 percent reduction in authorized AUMs in both the short and long terms. To explore the response of the outcomes to the effects of livestock grazing, the SAG adjusted their assumptions about the change in detrimental livestock grazing effects under Alternative S2 for the two restoration scenarios. Scenario 1 assumed a 50 percent reduction and Scenario 2 assumed a 100 percent reduction in detrimental livestock grazing effects. The SAG again predicted the implications of these scenarios on authorized AUMs as applied to Forest Service- and BLM-administered lands within the ranges of the two grouse species. A 50 percent reduction in grazing effects was predicted to result in a 25 to 60 percent reduction in authorized AUMs over the 100-year projection period compared to that predicted for the current time period. A 100 percent reduction in grazing effects was predicted to result in a 85 to 99 percent reduction in authorized AUMs over 100 years. The percentage reductions in livestock grazing would apply to only a portion of Forest Service- and BLM-administered lands, so that when averaged across Forest Service- and BLM-administered lands, the percentage reduction would be less.

The SAG analysis found that an additional investment of 20 to 39 million dollars annually, coupled with reducing detrimental livestock grazing effects by 50 to 100 percent, could improve the projected environmental outcomes for sage grouse and sharp-tailed grouse on Forest Service- and BLM-administered lands. The SAG models indicate that the environmental outcome for sage grouse (on Forest Service- and BLM-administered lands) would increase from the "D" outcome that was predicted under Alternative S2 in the Supplemental Draft EIS to a "C" under both scenarios. The population outcome of "D" on all lands would not change. The environmental outcome for Columbian sharp-tailed grouse on Forest Service- and BLM-administered lands would remain a "D", but would improve within the "D" outcome range with Scenario 1, and would improve to a "C" with Scenario 2. The population outcome of "E" predicted for sharp-tailed

Modifications Made to ICBEMP Supplemental Draft EIS Chapter 4 (Continued)

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Table/Fig/Map/Photo

Change Made (bold = new; strikeout = delete)

grouse (on all lands) in the Supplemental Draft EIS would remain an "E" under either scenario.

The SAG concluded that these results suggest an aggressive combination of livestock grazing management (including managing the season, timing, frequency, duration, intensity, and amount of livestock grazing pressure) and restoration activities could improve long-term conditions for sage grouse and Columbian sharp-tailed grouse in the basin. However, restoration costs may be high. Moreover, the need to integrate and apply a variety of restoration practices across vast areas of the two species' ranges has never been attempted and would be logistically challenging. An added uncertainty is the degree to which restoration treatments will be effective in controlling or stopping the continued spread of undesirable, invasive, exotic plants; this uncertainty is especially problematic, considering the extensive losses of shrub-steppe that have occurred due to cheatgrass invasion following fires.

Consequently, step-down planning and adaptive management approaches, designed to detect and build on successful methods, seem prudent.

Alternative S2 contains direction to maintain and restore rangeland habitats, including direction that could result in reduction of detrimental livestock grazing effects by 50 percent or more. For example:

- 1) Objective B-O10, taken from the *Healthy Rangelands* guidelines, would be applied to both BLM- and Forest Service-administered lands;
- 2) Priority would be given to address detrimental livestock grazing impacts in areas where grazing might be a "factor in causing an area to function 'at risk';"
- 3) Vegetative composition would be managed to maintain and restore source habitats of concern for Terrestrial Families 11 (includes sage grouse) and 12 (includes Columbian sharp-tailed grouse); and
- 4) Source habitats would be managed to be resilient to natural disturbances and to maintain or restore noxious weed-free plant communities.

Alternative S2 also includes broad-scale information which can be used to guide restoration priorities. For example:

- 1) Broad-scale opportunities for various species have been identified and mapped (Map 2-11a and Map 3-5, on pages 2-106 and 3-97 of the Supplemental Draft EIS) to aid in prioritizing existing funds to benefit rangeland species.
- 2) The areas identified for high restoration priority (see Map 3-8 in the Final EIS) include all 3 high priority rangeland subbasins and 8 of the 21 moderate priority rangeland subbasins.

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Table/Fig/Map/Photo

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However, it appears, based on the SAG analyses cited above, that funding may limit implementation of habitat maintenance and restoration objectives, and consequently may limit the improvement of rangeland species outcomes.

A solution to this could be to reallocate modeled funds from other identified high restoration priority subbasins to some of the moderate priority rangeland subbasins.

However, the high restoration priority subbasins were identified using an integrated approach, which recognized and incorporated the many resource needs in the basin. Reallocating funds would reduce the emphasis given to other resources of concern, such as listed aquatic species and old forest species. Further, the agencies have significant opportunity to prioritize use of existing funds or to request additional funding through the appropriations processes to implement the maintenance and restoration direction in Alternative S2. This opportunity is addressed in the Supplemental Draft EIS (in the Analysis of Implementation Costs and Outputs section): The management direction is adjustable to variable future funding levels.

4-98/right/1st para/2nd sentence

Revise: The predicted environmental outcomes on Forest Service-and BLM- administered lands would decrease for ~~three~~**two** of five species with Alternatives S2 and S3.

4-99/left/1st para/1st sentence

Revise: ~~all alternatives~~ **Alternative S1**, the predicted population outcome classes would improve from current for 11 species-seasonal combinations and would remain stable for 19 species-seasonal combinations. **For Alternatives S2 and S3, outcome classes would improve for 12 species-seasonal combinations and remain stable for 18.** The number of species-seasonal combinations with predicted outcomes of "A," "B," "C," "D," or "E" **under Alternative S1** would be 4, 4, ~~4~~ 9, 6 7, and 6, respectively (see Table 4-26). **The number of species-seasonal combinations with these outcome classes for Alternatives S2 and S3 would be 4, 5, 8, 7, and 6, respectively.**

4-106/left/1st para/

Insert prior to last sentence: Grizzly bear populations in the Selkirk-Cabinet-Yaak and North Cascades recovery areas are stable, but below and well below, respectively, recovery goals. There appear to be no grizzly bears in the Bitterroot Recovery Area.

4-106/right/1st para/
1st sentence

Revise: The northern subspecies of northern Idaho ground squirrel is ~~proposed to be~~ listed as threatened.

4-106/right/1st para/
1st sentence

Revise: Lynx, ~~proposed to be~~ listed as threatened, are included in Terrestrial Family 3.

4-109/Table 4-27

Revise: Species: canada lynx (~~proposed~~, **threatened**)

Revise: Species: northern Idaho ground squirrel (~~proposed~~, **threatened**)

Aquatic-Riparian-Hydrologic Component

4-114/right/1st full para/
last sentence

Insert after last sentence:...the aquatic SAG linked key processes in aquatic systems and conditions to landscape characteristics that are predicted to change as a result of management activities. **The Aquatics**

Modifications Made to ICBEMP Supplemental Draft EIS
Chapter 4 (Continued)

Page/Column/Paragraph or Table/Fig/Map/Photo	Change Made (bold = new; strikeout = delete)
	<p><i>Chapter (Lee et al. 1997) of the Assessment of Ecosystem Components</i> described some of the effects of mining and recreation on aquatic habitats; however, data were not available to model existing or projected mining and recreation activities under proposed alternatives or to be incorporated into the analysis of effects. Effects of specific mining and recreation proposals will be analyzed and disclosed during finer scale NEPA analysis.</p>
4-123/left/1 st para	<p><i>Insert after Native Fish Species title:</i></p> <p>As described in Chapter 3 of the Final EIS, a validation exercise related to the A1/A2 subwatersheds was undertaken following the release of the Supplemental Draft EIS. The intent to do that validation is described in Chapter 3 of the Supplemental Draft EIS, on page 3-133. The validation exercise increased the number of subwatersheds that meet the criteria in the Supplemental Draft EIS for designation as A1 and A2 subwatersheds, especially for those subwatersheds related specifically to westslope cutthroat trout and redband trout. After the validation exercise, the Executive Steering Committee decided to modify the criteria for identification of A1/A2 subwatersheds related to westslope cutthroat trout. The validation exercise and changes in criteria for westslope cutthroat trout resulted in an increase in the total acreage of subwatersheds that meet the revised A1/A2 criteria by approximately 268,000 acres (2.0 percent more than the original acreage under Alternative S2). The total acreage of A1 subwatersheds <i>decreased</i> by approximately 54,000 acres (0.8 percent less than the original acreage under Alternative S2) and A2 subwatersheds <i>increased</i> by approximately 322,000 acres (4.7 percent more than the original acreage under Alternative S2).</p> <p>The Science Advisory Group evaluated the effects of the changes in A1/A2 subwatersheds resulting from the validation exercise and the change in criteria on broad-scale aquatic species. Although some effects have changed slightly, they remain within the range of effects that are discussed in the Supplemental Draft EIS. The results of the SAG evaluation are as follows.</p> <p>The effects on stream-type chinook and steelhead would be similar to those presented in the Supplemental Draft EIS for Alternative S2, because the number of subwatersheds meeting the A1/A2 criteria for these species were only slightly changed from the original number.</p> <p>There was a small increase in the number of subwatersheds meeting the revised A1/A2 criteria for bull trout, and there would likely be a related small increase in the probability of high habitat capacity and strong population status for this species compared to those presented in the Supplemental Draft EIS for Alternative S2.</p> <p>The number of subwatersheds meeting the revised A1/A2 criteria for redband trout and Yellowstone cutthroat trout increased. There would likely be increases in the probability of high habitat capacity and strong population status for these two species compared to those presented in the Supplemental Draft EIS for Alternative S2.</p>

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Table/Fig/Map/Photo

Change Made (bold = new; strikeout = delete)

The number of subwatersheds meeting the revised A1/A2 criteria for westslope cutthroat trout decreased slightly, with a comparable small decrease in the probability of high habitat capacity and strong population status compared to those presented in the Supplemental Draft EIS for Alternative S2.

4-132/left/1st para/
last sentence

Revise: The remaining ~~40-12~~ listed **or proposed** species would be best addressed....

Social-Economic-Tribal Component

4-145/right

Insert after Effects of the Alternatives on Annual Levels of Goods and Services section:

As described in Chapter 3 of the Final EIS, a validation exercise related to the A1/A2 subwatersheds was undertaken following the release of the Supplemental Draft EIS. The intent to do that validation is described in Chapter 3 of the Supplemental Draft EIS, on page 3-133. The validation exercise increased the number of subwatersheds that meet the criteria in the Supplemental Draft EIS for designation as A1 and A2 subwatersheds, especially for those subwatersheds related specifically to westslope cutthroat trout and redband trout. After the validation exercise, the Executive Steering Committee decided to modify the criteria for identification of A1/A2 subwatersheds related to westslope cutthroat trout. The validation exercise and changes in criteria for westslope cutthroat trout resulted in an increase in the total acreage of subwatersheds that meet the revised A1/A2 criteria by approximately 268,000 acres (2.0 percent more than the original acreage under Alternative S2).

The Science Advisory Group evaluated the effects of the changes in A1/A2 subwatersheds resulting from the validation exercise and the change in criteria on social-economic concerns. Although some effects have changed slightly, they remain within the range of effects that are discussed in the Supplemental Draft EIS. The results of the SAG evaluation indicate that in general this change would result in few differences in socio-economic effects observable at the broad scale compared to those presented in the Supplemental Draft EIS for Alternative S2. There would be shifts in the level of restoration activities away from central Oregon with attendant reductions in economic benefits, especially in some counties of concern (such as Grant, Wallowa, Harney, and Lake).

4-146/left/2nd para/1st bullet

Revise: Livestock **use measured as authorized** animal unit months (AUMs), representing the number of domestic livestock that graze on Forest Service- and BLM-administered rangelands;

4-146/Table 4-33

Revise: Output or Activity: **Authorized** Animal Unit Months

4-147/left/1st para

Revise: Estimated domestic livestock use on Forest Service- and BLM-administered lands, measured in **authorized** AUMs, is shown in Table 4-34 by RAC/PAC for each alternative. **(See Glossary for definition of AUM.)**

4-147/right/2nd para

Revise:such as shifts in the share of range feeding vs. stockyard feeding for cattle, **changes in demand for beef in the U.S. and world markets**, shifts in the culture and...

Modifications Made to ICBEMP Supplemental Draft EIS
Chapter 4 (Continued)

Page/Column/Paragraph or Table/Fig/Map/Photo	Change Made (bold = new; strikeout = delete)
4-147/left/2 nd para/2 nd sentence	<i>Revise:</i> Authorized AUMs were calculated....
4-147/right/3 rd para/1 st sentence	<i>Revise:</i> The projected decline in Authorized AUMs ...
4-147/Table 4-34/title	<i>Revise:</i> Projected Authorized Animal Unit Months (AUMs) , by...
4-147/Table 4-34	<i>Add footnote 2 after "Total - Project Area":</i> ² The Project Area totals shown here are about 16,000 - 18,000 AUMs (approximately 0.6%) less than the Project Area totals shown in the <i>Socioeconomics Evaluation Chapter</i> (Crone and Haynes 2000) of the <i>Evaluation of the SDEIS Alternatives</i> . The difference is that the AUM numbers, as modeled by SAG, included small pieces of subwatersheds in the Sierra Front-Northwestern and Wyoming RACs that cross the political boundaries into the neighboring states. Since those two RACs are not included in the ICBEMP decision space, the associated AUMs were subtracted from the SAG totals to arrive at the totals shown above.
4-148	<i>Insert as sidebar:</i>

After the release of the Supplemental Draft EIS, the Science Advisory Group (SAG) conducted additional analysis of two restoration scenarios to explore potential benefits and costs of reducing detrimental livestock grazing effects and increasing restoration actions that could improve outcomes of sage grouse and Columbian sharp-tailed grouse habitats and populations in the basin. Results of these analyses are contained in reports by Hemstrom et al. (2000a) and Wisdom et al. (2000b). Two scenarios were modeled that:

- 1) decreased detrimental livestock grazing effects by approximately 50 percent and increased active restoration of rangeland habitats by approximately 30 percent (scenario 1); and
- 2) decreased detrimental livestock grazing effects by approximately 100 percent and increased active restoration of rangeland habitats by approximately 30 percent (scenario 2).

The intent of this modeling was to explore potential benefits to habitat for sage grouse and Columbian sharp-tailed grouse. The models indicated possible negative socio-economic effects. The SAG concluded that if the combinations of additional funding and grazing management strategies were actually implemented, average annual authorized AUMs on Forest Service- and BLM-administered lands in the project area within sage grouse and Columbian sharp-tailed grouse range could be reduced. A 50 percent reduction in grazing effects was predicted to result in a 25 to 60 percent reduction in authorized AUMs over the 100-year projection period compared to that predicted for the current time period. A 100 percent reduction in grazing effects was predicted to result in a 85 to 99 percent reduction in authorized AUMs over 100 years. These estimated reductions in authorized AUMs would occur only on portions of Forest Service- and

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Change Made (bold = new; strikeout = delete)

BLM-administered lands within the historical ranges of sage grouse and sharp-tailed grouse in the basin. The percentage reductions in livestock grazing would apply to only a portion of Forest Service- and BLM-administered land, so that when averaged across Forest Service- and BLM- administered lands, the percentage reduction would be less. The SAG further concluded that it would require *both* the additional rangeland restoration investments *and* the additional grazing management strategies to improve outcomes. Reduction in detrimental grazing effects or increased active restoration as individual management actions would not be sufficient. To the degree that additional funding might be made available in the future for this focused rangeland restoration work, and that additional grazing management strategies might be adopted in conjunction with that funding increment, additional uncertainty could be introduced into the projections of first decade authorized AUMs discussed for Alternative ☐ S2.

4-148/left/2nd full para/
1st sentence

Revise: With Alternatives S2 and S3, all RAC/PAC areas would see a decline in **authorized** AUMs...

4-148/left/4th full para/
2nd sentence

Revise: ...a more substantial effect from changes in **authorized** AUMs...

4-157/before Recreation-related
Employment heading

Insert as sidebar:

After the release of the Supplemental Draft EIS, the Science Advisory Group (SAG) conducted additional modeling (Hemstrom et al. 2000a, Wisdom et al. 2000b) to explore potential benefits and costs of rangeland management and restoration actions that could improve outcomes for sage grouse and Columbian sharp-tailed grouse habitats and populations on Forest Service- and BLM-administered lands in the project area. Two restoration scenarios were examined that incorporated reductions in detrimental grazing effects and additional rangeland restoration funding (see additional discussion in the Livestock AUMs/Production Levels section of this chapter). The projected reductions in authorized AUMs for scenarios 1 and 2 are averaged over 100 years. In ten years (short-term), there would be some lag time to implement reductions; therefore, average reductions would be less in the first decade due to this lag time. **NOTE:** The majority of the reductions estimated for Alternative S2 was projected to occur within the first 10 years. Under the assumptions of this analysis, additional uncertainty could be introduced into the projections of grazing-related jobs compared to the projected decline of 112 grazing-related jobs in Alternative S2 over the first decade.

4-157/left/ subheading under
Potential Effects

Revise: Total **Direct** Employment

4-157/right/2nd para/2nd sentence

Revise:includes an **upward** adjustment of 20 percent...

Modifications Made to ICBEMP Supplemental Draft EIS Chapter 4 (Continued)

Page/Column/Paragraph or Table/Fig/Map/Photo

Change Made (bold = new; strikeout = delete)

4-161/left/1st full para/1st sentence

Revise: In general, Forest Service and BLM land use decisions have little influence **basin-wide** on factors important to socio-economic resiliency.

4-166/left/3rd para/
last sentence

Revise: This lag time would result in part from the need to complete any required Subbasin Review, EAWS, and NEPA analysis for individual projects or groups of projects, **and in part to the need to develop additional local laborforce capacity to handle the added restoration work and mill capability to handle the flow of smaller diameter and poorer quality wood.**

4-170/left/2nd full para/
5th sentence

Revise: External forces that may affect social and economic conditions include population changes, industry restructuring, changes in economic supply and demand, **labor force availability, mill capacity**, lifestyle preferences, and climatic changes.

4-170/left/last para before
Quality of Life section/
3rd to last sentence

Revise: External forces that may affect... industry restructuring, **local labor force and mill capacity**, changes in economic supply and demand...

4-171/right

Insert the following paragraphs before Sense of Place:

Natural Areas

Natural areas are unique in that they provide opportunities for recreation, scenery, and conservation of native plants and animals and rare plant communities, among other things. They provide resources for study as well as for teaching. Often they sustain some native ecological processes and functions. Many natural areas overlap with roadless areas, designated wilderness, or wilderness study areas.

Currently about 56 percent of the 12.5 million acres of natural areas are in the None and Low class of Composite Historical Range of Variability Departure (Composite HrvDep), which means that the ecological processes and functions in about 56 percent of natural areas are the same as or similar to their historical range of variability. In comparison, lands not in designated natural areas have about 38 percent in the None and Low classes. In the long-term (100 years), continuation of current management (Alternative S1) in natural areas should result in conditions declining to about 18 percent of None and Low classes of Composite HrvDep. The other alternatives (S2 and S3) are expected to have similar outcomes. The models show little improvement under Alternatives S2 and S3 because they do not call for a substantial increase in active restoration of fire processes combined with control of invasive weeds within natural areas. Current levels of prescribed fire and "wildland fire use for resource benefit" (prescribed natural fire) are not expected to increase within natural areas because of the risks to life and property by allowing fires to burn in the summer.

More specifically, the areas of increasing Composite HrvDep (where conditions are increasingly different from the historical range of

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Change Made (bold = new; strikeout = delete)

variability) are strongly correlated with the larger contiguous blocks of cold forest, moist forest, and cool shrub/grassland in the wilderness of central Idaho, north-central Montana, north-central Washington, northeastern Oregon, and southeastern Oregon. These areas present a substantial risk of large wildfire occurrence and of escape of summer prescribed natural fires. Most of these areas also contain patches of invasive weeds that are at substantial risk to increase after a wildfire.

Lack of active management would result in a general decline in conditions due primarily to wildfires, insects and disease, weed invasion, vegetation succession, and negative recreational use effects. This will reduce the value of natural areas particularly in contributing to conservation of landscapes with natural process and native species habitats intact. Potential effects on the natural areas will be further analyzed and considered through mid-scale and fine-scale analyses during the step-down process to evaluate local options to improve outcomes for natural areas.

4-179/right/2nd para

Insert the following paragraphs before first paragraph of Important Species and Habitats section:

As described in Chapter 3 of the Final EIS, a validation exercise related to the A1/A2 subwatersheds was undertaken following the release of the Supplemental Draft EIS. The intent to do that validation is described in Chapter 3 of the Supplemental Draft EIS, on page 3-133. The validation exercise increased the number of subwatersheds that meet the criteria in the Supplemental Draft EIS for designation as A1 and A2 subwatersheds, especially for those subwatersheds related specifically to westslope cutthroat trout and redband trout. After the validation exercise, the Executive Steering Committee decided to modify the criteria for identification of A1/A2 subwatersheds related to westslope cutthroat trout. The validation exercise and changes in criteria for westslope cutthroat trout resulted in an increase in the total acreage of subwatersheds that meet the revised A1/A2 criteria by approximately 268,000 acres (2.0 percent more than the original acreage under Alternative S2).

The Science Advisory Group evaluated the effects of the changes in A1/A2 subwatersheds resulting from the validation exercise and the change in criteria on broad-scale tribal concerns. Although some effects have changed slightly, they remain within the range of effects that are discussed in the Supplemental Draft EIS. The results of the SAG evaluation are as follows. The potential slight increases in probabilities for high aquatic habitat capacity and strong population status for bull trout and Yellowstone cutthroat trout (species of tribal concern) compared to those presented in the Supplemental Draft EIS for Alternative S2 may result in additional benefits for tribes. Decreases in probabilities for high aquatic habitat capacity and strong population status for westslope cutthroat trout (also a tribal species of concern) may have negative effects on tribes.

Modifications Made to ICBEMP Supplemental Draft EIS Chapter 4 (Continued)

Page/Column/Paragraph or
Table/Fig/Map/Photo

Change Made (bold = new; strikeout = delete)

4-192/right

Insert after last paragraph:

Cumulative Effects

ICBEMP EIS and the Cohesive Strategy for Protecting People and Sustaining Resources in Fire-Adapted Ecosystems

In Title IV of the Fiscal Year 2001 Appropriations Act for the Department of the Interior and other Related Agencies, Congress directed the Forest Service to publish the *Cohesive Strategy for Protecting People and Sustaining Resources in Fire-Adapted Ecosystems* (USDA, Forest Service) in the *Federal Register* and to explain any differences between the *Cohesive Strategy* and certain rulemakings and planning efforts in EISs for those rulemakings and planning efforts. The *Cohesive Strategy* was published in the *Federal Register* on November 9, 2000. The following discussion explains how the *Cohesive Strategy* was analyzed in developing this Final EIS and identifies differences between the strategy and the three management alternatives presented in this document.

The *Cohesive Strategy* established a policy framework to restore and maintain ecosystem health in fire-adapted ecosystems on lands administered by the Forest Service. The purpose of the policy is to provide policy direction to the Forest Service to improve the resilience and sustainability of forests and grasslands; to conserve priority watersheds, species, and biodiversity; reduce wildland fire costs, losses, and damages; and better ensure public and firefighter safety. The focus is on restoration and maintenance of ecosystems with frequent natural fire regimes. For an additional discussion of the *Cohesive Strategy*, see the discussion in Chapter 1.

The *Cohesive Strategy* is consistent with the *Scientific Assessment* (1997) and the Draft and Supplemental Draft EISs (1997 and 2000, respectively). Much of the understanding developed from the comprehensive *Scientific Assessment* and *SAG Effects Analysis for the SDEIS Alternatives* became the foundation for development of and analysis for the *Cohesive Strategy*.

The condition class definitions used in the *Cohesive Strategy* are similar to the composite historical range of variability departure information used in the Supplemental Draft EIS (see Appendix D of the *Cohesive Strategy*). Both classifications were derived from 250-acre (1 square kilometer) data on vegetation cover type, structure, and site potential; fire regime; and topography. However, the *Cohesive Strategy* data, which encompass the lower 48 states, are less accurate than the ICBEMP data because of the higher variability of ecosystems and disturbance regimes across the much larger area. Work is underway to develop science-based analytical tools and finer-scale

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Change Made (bold = new; strikeout = delete)

maps to support consistent integration of the *Cohesive Strategy* with ICBEMP, as well as other planning efforts across the nation.

The management direction for Alternatives S2 and S3 is consistent with the *Cohesive Strategy*. For example, there is direction to restore vegetation conditions to lessen uncharacteristic fire regimes. The urban-rural-wildland interface is a focus area (see Objective R-O5). Maintenance of existing low risk areas (categorized as "Condition Class 1" in the *Cohesive Strategy*), readily accessible municipal watersheds, and threatened and endangered species habitat are addressed in the EIS with a focus to "repattern succession/disturbance regimes and achieve sustainable landscape conditions" (see Objective R-O4). Alternatives S2 and S3 also address restoration of the vegetative composition, structure, patch size, and pattern to match the historical disturbance regime. This is consistent with assumptions for predicting outcomes in the Consequences of Deferral section of the *Cohesive Strategy*.

In contrast, the No-action Alternative (S1) is not consistent with the *Cohesive Strategy*. Alternative S1 is based on direction from existing land use plans as amended by interim direction (PACFISH, INFISH and Eastside Screens). The general intent of managing forestland vegetation management in Alternative S1 is to rely on even-aged management practices, favor early seral species with reduced stand densities, and improve growth and yield. Current wildland fire management (Alternative S1) follows the federal fire policy with little increase in "wildland fire use for resource benefit" (prescribed natural fire).

In the No-action Alternative, Forest Service- and BLM-administered lands throughout the project area would continue to be managed under the 62 land use plans, which range from 6 to 21 years old. Many of the plans were developed with the assumption that ecological conditions were healthy, or that disturbances (such as fire, insects, and disease) would not substantially affect planned actions or desired outcomes. In addition, the Eastside Screens interim strategy (for eastern Oregon and eastern Washington National Forests) focuses on short-term protection of old forests and short-term risks from management activities and does not recognize risks from uncharacteristic fires.

The *Cohesive Strategy* recognizes these issues in a broad national context and provides policy on the purpose and focus of restoration in fire-adapted ecosystems. The ICBEMP proposed decision/preferred alternative (Alternative S2) provides the foundation for a NEPA decision that would amend the Forest Service and BLM land use plans within the project area to implement the cohesive restoration policy.

ICBEMP EIS and Fiscal Year 2001 Wildland Fire Emergency Appropriations

Title IV of the Fiscal Year 2001 Interior Appropriations for the Department of the Interior and Related Agencies contains additional appro-

Modifications Made to ICBEMP Supplemental Draft EIS Chapter 4 (Continued)

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Change Made (bold = new; strikeout = delete)

priations and Congressional direction to address the impacts of wildland fires that burned in the summer of 2000.

This new Congressional direction requires the BLM and Forest Service to work closely with states and local communities to maximize benefits to the environment and to local communities. Agencies are also expected to seek the advice of governors and local and tribal government representatives in setting priorities for fuels treatments, burned area rehabilitation, and public outreach and education. Increased funding for hazardous fuels treatments will be focused on projects within the urban-rural-wildland interface on federal lands or adjacent non-federal lands.

Increased levels of thinning, prescribed fires, and other restoration projects are expected in response to the higher funding levels. Forest Service regional offices and BLM state offices have made initial estimates of lands that will be affected by fuels reduction projects. It is expected that the increased levels of management activities pursuant to the additional appropriations will fall within the range of projected activities estimated in the Supplemental Draft EIS (Tables 4-3, 4-35, 4-37 through 4-41, 4-57 through 4-60). The cumulative effects of additional activities are therefore expected to fall within the range of projected effects.

ICBEMP EIS and the Forest Service Roadless Area Conservation Final EIS

Overall, Alternatives S2 and S3 would be consistent with the preferred alternative identified in the Forest Service Roadless Area Conservation Final EIS (Roadless Final EIS).

The Roadless Final EIS is at a broader scale than the ICBEMP. The Roadless EIS addresses roads and timber harvest within all Forest

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Service-administered inventoried roadless areas, while the ICBEMP EIS addresses a diverse array of land management issues on both Forest Service- and BLM-administered lands in the interior Columbia River Basin, and parts of the upper Klamath Basin and Great Basin. This overlap in planning areas requires that the two EISs be consistent.

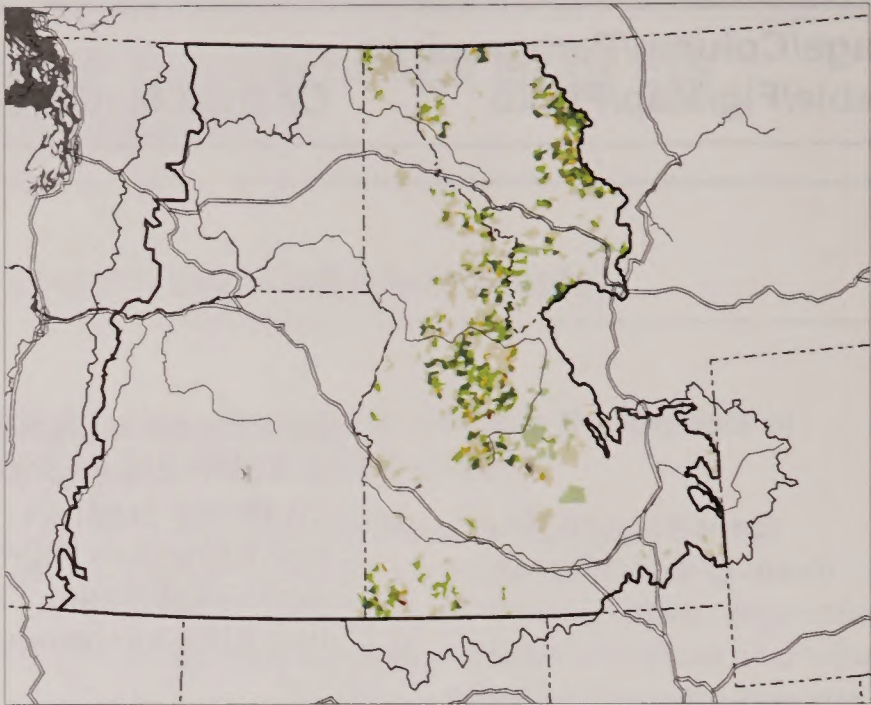
The preferred alternative identified in the Roadless Final EIS precludes most road building within Forest Service roadless areas and allows timber harvest within inventoried roadless areas only when those activities have a stewardship emphasis. The preferred alternative/proposed decision (Alternative S2) identified in the ICBEMP Final EIS focuses on stewardship harvest of timber throughout the project area, which encompasses more than Forest Service-administered inventoried roadless areas. Although Alternative S2 would not restrict road construction or reconstruction within roadless areas, it does state that road construction or reconstruction within unroaded areas would be rare.

The preferred alternative in the Roadless Final EIS and the preferred alternative/proposed decision in the ICBEMP Final EIS are consistent for timber harvest for stewardship purposes within Forest Service-administered inventoried roadless areas in the ICBEMP project area. The preferred alternative in the Roadless Final EIS would be more restrictive than any of the ICBEMP Final EIS alternatives regarding road construction or reconstruction within Forest Service-administered inventoried roadless areas. Because road building within unroaded areas would be rare under ICBEMP Alternatives S2 or S3, this difference would have little if any effect on the basin-wide effects disclosed in the ICBEMP Final EIS or Supplemental Draft EIS.

















4-194/left/4th para/2nd sentence

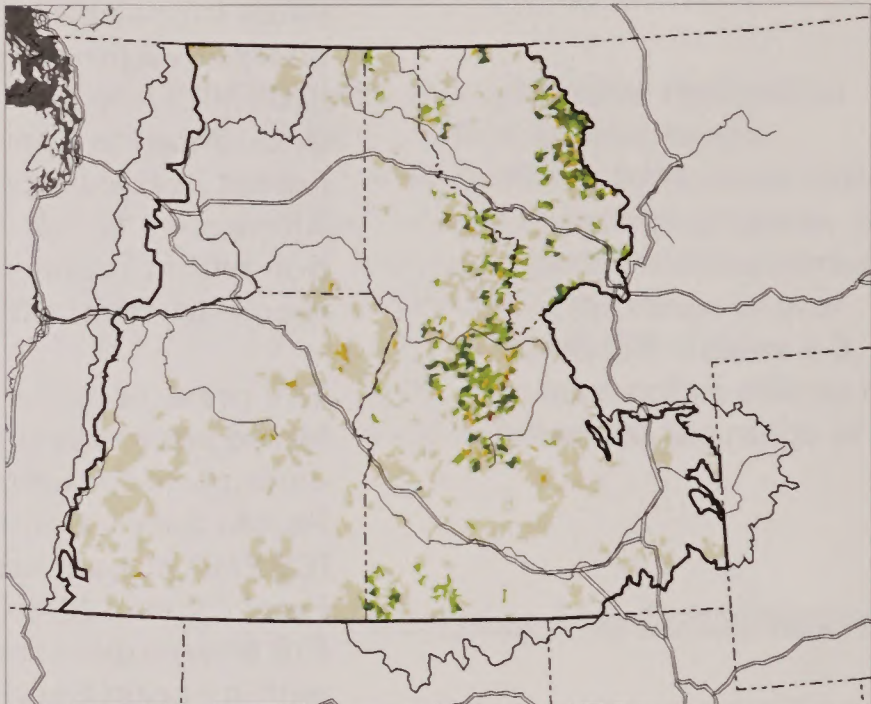
Revise: In general, Alternative S1 is expected to produce somewhat larger logs, yet lesser **total** volumes of saw timber than Alternatives S2 and S3.

Map 4-4.
"Wildland Fire Use
for Resource Benefit"
Activity Classes:
Change from Current

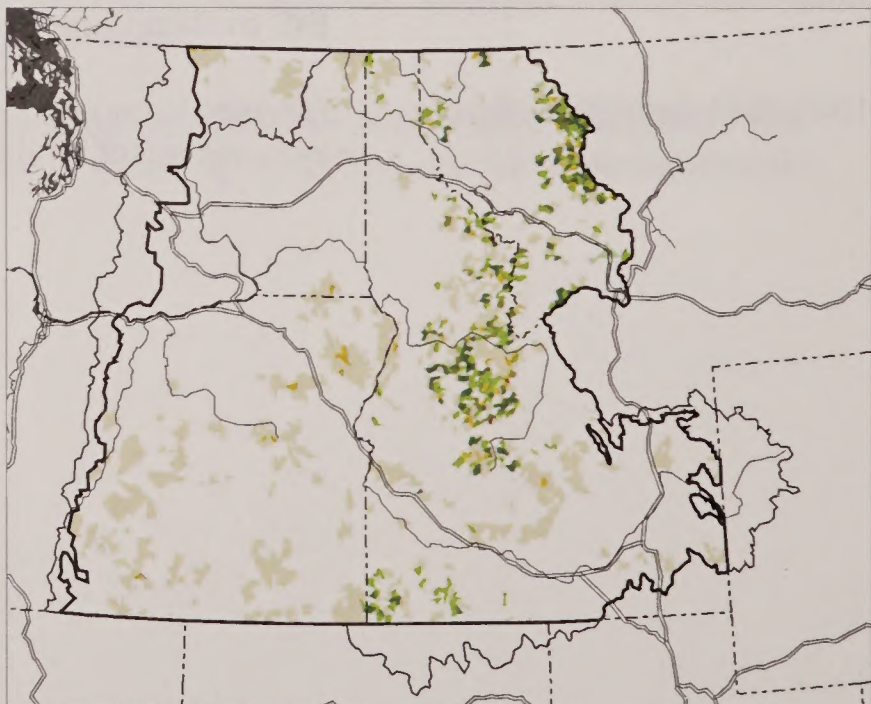


Alternative S1

-  None to High
-  Low to High
-  Moderate to High
-  None to Moderate
-  Low to Moderate
-  None to Low
-  High to None
-  High to Low
-  High to Moderate
-  Moderate to None
-  Moderate to Low
-  Low to None
-  No Change
-  Major Rivers
-  Major Roads
-  Planning Area Border



Alternative S2



Alternative S3

INTERIOR COLUMBIA
BASIN ECOSYSTEM
MANAGEMENT PROJECT

Final EIS
2000

Chapter 5

Preparation, Consultation, and Coordination

Chapter 5 of the Supplemental Draft EIS is incorporated by reference, in accordance with 40 CFR 1500.4(j) and (o), 1502.21 and 1506.4. The incorporated material can be found on pages 5-1 through 5-36 in Volume 1 of the Supplemental Draft EIS.

Summary

This Supplemental Draft Environmental Impact Statement (SDEIS) was prepared by an interdisciplinary team of specialists for the Interior Columbia Basin Ecosystem Management Project (ICBEMP). The changes from the Supplemental Draft EIS are included here.

EIS Team Members—Corrections

Cliff Walker
Tribal Liaison
(until October 1999)

A.S. Forestry
Grays Harbor Community College

B.S. Forestry
Washington State University

B.S. Business Management
Marylhurst College

U.S. Forest Service (10 years)
Bureau of Indian Affairs (12 years)
Private Industry, logging, (12 years)
U.S. Army (3 years)

Experience includes positions as
Check Scaler, Timber Sale
Administration Forester, Sale Prep
Forester (forest and regional),
Assistant Forest Manager, and Tribal
Staff Assistant.

Cheryle Zwang
Tribal Liaison
(until January 2000)

B.S. Communications and English
Montana State University

BLM (2 years)
U.S. Forest Service (12 years)
Montana State Indian Affairs Office (2 years)

Experience includes positions as
Regional Legislative Affairs
Coordinator, Regional Public
Participation Program
Manager, Tribal Government
Liaison, and Public Affairs
Specialist.

Science Advisory Group—Update

Russell Graham, Acting Science Advisory Group Leader (from October 2000)
Forest Service, Pacific Northwest Research Station, Forestry Sciences Laboratory, LaGrande, Oregon

Content Analysis

Data Entry

Denita Arvanitakis
 Brett Callahan
 Wendy Diamond
 Martha Diaz
 Amber Grant
 David Guidry
 Jennifer Jenkins-Caldwell
 Mat "Just Happy To Be Here" Jibben
 Dean Pearce
 Alison Preszler

Coders

Brett Callahan
 Mary Carr
 David Guidry
 Cathy Humphrey
 Jennifer Jenkins-Caldwell
 Mat Jibben
 Donna Kreienseik
 Elayne Murphy
 Dean Pearce

Writers

Diana Baxter
 Brett Callahan
 Mary Carr
 Mat Jibben
 Nancy Mitchell

Document Production—Additions

Jennifer Jenkins-Caldwell
 Nancy Chadwick
 Jennifer Leggett

Glossary

The Glossary of the Supplemental Draft EIS is incorporated by reference, in accordance with 40 CFR 1500.4(j) and (o), 1502.21 and 1506.4. The incorporated material can be found at the end of Volume 1 of the Supplemental Draft EIS. The changes from the Supplemental Draft EIS are included here.

A

A1/A2 subwatershed — As defined in this EIS, refers to one of the components of the aquatic-riparian-hydrologic strategy. These areas provide a system of core subwatersheds that are the anchor for recovery and viability of widely distributed native fishes. Both A1 and A2 subwatersheds include important fish populations of one or more of the following: known strong populations for the seven key salmonids; important anadromous fish populations in the Snake River Basin; genetically pure populations of anadromous fish outside the Snake River Basin; and fringe populations for four of the key salmonids. A1 and A2 subwatersheds differ in their definition and their management direction, as described in Chapter 3.

Adaptive management — A type of natural resource management in which decisions are made as part of an ongoing process. Adaptive management involves planning, implementing, monitoring, evaluating, and incorporating new knowledge into management approaches based on scientific findings and the needs of society. Results are used to modify future management methods and policy.

Administrative unit — A management area—such as a Forest Service national forest or a BLM district, field, office, or resource area—under the administration of one line officer. Forest Service line officers in-

clude district rangers and forest supervisors; BLM line officers include district managers, field office managers, and area managers.

Allotment (grazing) — Area designated for the use of a certain number and kind of livestock for a prescribed period of time.

Animal Unit Month (AUM) — The amount of feed or forage required by one animal unit grazing on a pasture for one month. The numbers of AUMs presented in the EIS are *authorized* AUMs which in the EIS means the number of AUMs on the yearly billings to permittees.

Aquatic Habitat Capacity — the amount and quality, relative to potential, of aquatic habitat necessary to support the numbers, sizes or age states, and life history types of salmonids that historically (approximately 250 years before present) have occurred within a subwatershed.

High - Sediment input and riparian conditions that influence the creation and maintenance of suitable habitat for salmonids and have not been substantially altered or constrained by human influences. The frequency of channel reorganizing events due to upslope activity also has not been changed. At the time of evaluation, the subwatershed supports approximately 75 to 100 percent of the potential habitat capacity.

Moderate - Sediment input, riparian conditions, and/or the frequency of channel reorganizing events have been altered by human activities such that, at the time of evaluation, a subwatershed supports 50 to 75 percent of the potential habitat capacity.

Low - Sediment input, riparian conditions, and/or the frequency of channel reorganizing events have been altered such that, at the time of evaluation, a subwatershed supports less than 50 percent of the potential habitat capacity.

Aquatic (and riparian) health — Aquatic and riparian habitats that support animal and plant communities that can adapt to environmental changes and follow natural evolutionary and biogeographic processes. Healthy aquatic and riparian systems are resilient and recover rapidly from natural and human disturbance. They are stable and sustainable, in that they maintain their organization and autonomy over time and are resilient to stress. In a healthy aquatic/riparian system there is a high degree of connectivity from headwaters to downstream reaches, from streams to floodplains, and from subsurface to surface. Floods can spread into floodplains, and fish and wildlife populations can move freely throughout the watershed. Healthy aquatic and riparian ecosystems also maintain long-term soil productivity. Mineral and energy cycles continue without loss of efficiency.

B

Basin (river) — (1) In general, the area of land that drains water, sediment, and dissolved materials to a common point along a stream channel. River basins are composed of large river systems. (2) In this EIS, the term refers to the equivalent of a 3rd-field hydrologic unit code, an area of about nine million acres, such as the Salmon River Basin. It also is used to refer to the interior Columbia River Basin assessment area (both Forest Service- and BLM-administered lands and other ownerships) as defined in the *Scientific Assessment* (Quigley and Arbelbide 1997).

Bayesian Belief Network (BBN) Model — A model in graphical form representing a multivariate probability distribution of random variables (Haas 1991). The graphical form of a BBN resembles a flowchart with variables (referred to as nodes) linked with arrows, representing casual influences among the variables. A BBN is directed so that influences among variables flow in one direction only, and acyclic because there are no arrows leading back to input variables. BBNs provide a quantitative framework that allows information from both empirical data and expert opinion to be combined in an evaluation process. Outcomes for each node are described by predicted levels of states, which are expressed as probabilities.

For example, the state levels “Yes” (probability of occurrence = 0.65) and “No” (probability of non-occurrence = 0.35) could define a node representing a large flood event. For further information on the BBN models, see Quigley 1999.

Biological crust — Thin crust of living organisms on or just below the soil surface, composed of lichens, mosses, algae, fungi, cyanobacteria, and bacteria.

Broad scale — A large, regional area, such as a river basin and typically a multi-state area. See Chapter 2 Introduction for complete discussion and comparison to mid and fine scale.

Broad-scale species — Those species whose source habitats could be mapped reliably using a block size of at least 247 acres (100 ha.).

C

Coarse Woody Debris (CWD) — Pieces of woody material derived from tree limbs, boles, and roots in various stages of decay, generally having a diameter of at least three inches and a length greater than three feet.

Collaboration-The relationship among the five federal agencies involved with ICBEMP (Forest Service, BLM, National Marine Fisheries Service, U.S. Fish and Wildlife Service, and Environmental Protection Agency [the “interagency partners”]) and with other federal, state, tribal, and local government officials as appropriate to the geographic area and the issue(s) (the “intergovernmental partners”). While the ultimate goal of collaboration is consensus, collaboration can include a full spectrum of involvement of the parties, such as:

- ♦ Informing - letting others know what the land management agencies are planning or proposing;
- ♦ Coordinating - minimizing the likelihood that efforts among intergovernmental partners are contradictory;
- ♦ Cooperating - developing shared goals and expectations and increasing the likelihood that efforts of the intergovernmental partners are complementary and synergistic;
- ♦ Consensus - mutual support among intergovernmental partners for a decision or a course of action. While each partner retains statutory and delegated responsibilities.

Community — (1) A group of species of plants and/or animals living and interacting at a particular time and place. (2) A group of people residing in the same place and under the same government; spatially defined places such as towns.

Composition (species) — The mix of different species that make up a plant or animal community, and their relative abundance.

Connectivity — The arrangement of habitats that allows organisms and ecological processes to move across the landscape; patches of similar habitats are either close together or linked by corridors of appropriate vegetation. The opposite of fragmentation.

Conservation strategy/conservation agreement — Plans to remove or reduce threats to candidate and sensitive species of plants and animals so that a listing as threatened or endangered is unnecessary.

Consultation — (1) An active, affirmative process that (a) identifies issues and seeks input from appropriate American Indian governments, community groups, and individuals; and (b) considers their interests as a necessary and integral part of the BLM's and Forest Service's decision-making process. (2) The federal government has a legal obligation to consult with American Indian tribes. This legal obligation is based in such laws as NAGPRA, AIRFA, and numerous other executive orders and statutes. This legal responsibility is, through consultation, to consider Indian interests and account for those interests in the decision. (3) The term also refers to a requirement under Section 7 of the Endangered Species Act for federal agencies to consult with the U.S. Fish and Wildlife Service and/or National Marine Fisheries Service with regard to federal actions that may affect listed threatened and endangered species or critical habitat.

Cover type — A vegetation classification depicting a genus, species, group of species, or life form of tree, shrub, grass, or sedge. The present vegetation of an area.

Cumulative effects — Impacts on the environment that result from the incremental impact of an action when added to other past, present, and reasonably foreseeable future actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time. In

this EIS, potential cumulative effects include those that were assessed for all ownerships, including lands administered by other federal agencies and non-federal lands, especially regarding terrestrial and aquatic species.

Current period — In this EIS, generally depicts conditions in the project area representative of the period between 1985 and 1995, approximately.

D

De minimis — Very small or of little significance.

Density (stand) — The number of trees growing in a given area, usually expressed in terms of trees per acre.

Direct effects — Impacts on the environment that are caused by the action and occur at the same time and place.

Disturbance — Refers to events that alter the structure, composition, or function of terrestrial or aquatic habitats. Natural disturbances include, among others, drought, floods, wind, fires, wildlife grazing, and insects and diseases. Human-caused disturbances include, among others, actions such as timber harvest, livestock grazing, roads, and the introduction of exotic species.

Disturbance-recovery regime — Natural pattern of periodic disturbances, such as fire or flood, followed by a period of recovery from the disturbance (such as regrowth of a forest after fire).

Downed wood — A tree or part of a tree that is dead and laying on the ground.

E

Eastside Screens — Interim management direction establishing riparian, ecosystem, and wildlife standards for timber sales on Forest Service-administered lands in eastern Oregon and Washington.

Ecological integrity — In general, ecological integrity refers to the degree to which all ecological components and their interactions are represented and functioning; the quality of being complete; a sense of

wholeness. Absolute measures of integrity do not exist. Proxies provide useful measures to estimate the integrity of major ecosystem components (forestland, rangeland, aquatic, and hydrologic). Estimating these integrity components in a relative sense across the project area helps to explain current conditions and to prioritize future management. Thus, areas of high integrity would represent areas where ecological functions and processes are better represented and functioning than areas rated as low integrity. In this EIS, ecological integrity is used to show the integrated condition of the biophysical environment within the project area.

Ecological processes — The flow and cycling of energy, materials, and organisms in an ecosystem. Examples of ecosystem processes discussed in this EIS include the carbon and hydrologic cycles, terrestrial and aquatic food webs, and plant succession, among others.

Ecological Reporting Unit (ERU) — In this EIS, a geographic mapping unit developed by the Science Integration Team to report information on the description of biophysical environments, the characterization of ecological processes, the discussion of past management activities and their effects, and the identification of landscape management opportunities.

Economically specialized community — A community whose employment in one or more industry groups (for example, agriculture, mining, construction, or manufacturing), as a percentage of total community employment, is greater than the same percentage for the economic subregion in which the community is located. For instance, if the jobs in a particular industry group in the economic subregion make up 5 percent of total employment, but the jobs in the local community in that industry account for 10 percent of total community employment, the community would be considered economically specialized in that industry. (See Reyna 1998 for more detail on determining economic specialization.)

Ecosystem — A complete, interacting system of living organisms and the land and water that make up their environment; the home places of all living things, including humans.

Ecosystem health — A condition where the parts and functions of an ecosystem are sustained over time and where the system's capacity for self-repair is main-

tained, such that goals for uses, values, and services of the ecosystem are met.

Ecosystem-based management — The use of an ecological approach to achieve multiple-use management of public lands by blending the needs of people and environmental values in such a way that Forest Service and BLM lands represent diverse, healthy, productive, and sustainable ecosystems.

Endangered species — A plant or animal species listed under the Endangered Species Act that is in danger of extinction throughout all or a significant portion of its range.

Environmental Impact Statement (EIS) — A statement of environmental effects of a proposed action and alternatives to it. A Draft EIS is released to the public and other agencies for review and comment. A Final EIS is issued after consideration of public comments. A Record of Decision (ROD) is based on the information and analysis in the Final EIS.

Environmental Outcome (terrestrial species) — A characterization of outcome, based on habitat capacity, range extent, and connectivity. See Chapter 4, Terrestrial Species Component, for a complete discussion.

Excessive livestock grazing pressure — Grazing pressure that results in a decline in physiological vigor of plants, typically observed as a decline in reproductive output (for example, seeds and rhizomes) and growth, both above ground (for example, tiller production of grasses) and below ground (for example, root growth). This decline in physiological vigor results in decreased ability of the plant to compete for resources and results in alteration of plant species composition in plant communities. The connotation of this phrase is negative.

Extirpation — Loss of populations from all or part of a species' range within a specified area.

F

Federal Land Policy and Management Act (1976) (FLPMA) — The act that establishes public land policy primarily for the Bureau of Land Management; establishes guidelines for its administration; and provides for the management, protection, development, and enhancement of the public lands, among other provisions.

Fine scale — A single landscape, such as a watershed or subwatershed. See Chapter 2 Introduction for a complete discussion and comparison to broad and mid scale.

Fine-scale species — Those species whose source habitats could not be mapped reliably using a block size of at least 247 acres (100 ha.).

Fire-intolerant — Species of plants that do not grow well with or die from the effects of too much fire. Generally these are shade-tolerant species.

Fire regime — The characteristics of fire in a given ecosystem, such as the frequency, predictability, intensity, and seasonality of fire.

Fire-tolerant — Species of plants that can withstand certain frequency and intensity of fire. Generally these are shade-intolerant species.

Forest health — The condition in which forest ecosystems sustain their complexity, diversity, resiliency, and productivity to provide for specified human needs and values. It is a useful way to communicate about the current condition of the forest, especially with regard to resiliency, a part of forest health that describes the ability of the ecosystem to respond to disturbances. Forest health and resiliency can be described, in part, by species composition, density, and structure.

Forest plan (Forest Land and Resource Management Plan) — A document that guides natural resource management and establishes standards and guidelines for a national forest; required by the National Forest Management Act.

G

Geographic Information System (GIS) — An information processing technology to input, store, manipulate, analyze, and display data; a system of computer maps with corresponding site-specific information that can be combined electronically to provide reports and maps.

Goals (management) — In this EIS, refers to descriptions of what an agency wants to accomplish.

Grazing pressure — The ratio of forage demand to forage available, for any specified forage, at any point in time. (Thus, as forage demand increases relative to

forage available, grazing pressure increases, and vice-versa.)

Guideline (management) — In this EIS, refers to suggested action, priority, process, or prescription that may be useful in meeting objective(s). Guidelines are not required but are included in the ICBEMP EIS and ROD to provide suggested techniques to meet the objectives. “May”, “can”, or “could” are used in guidelines to indicate that they are suggested techniques, which are optional.

H

Habitat capacity — A weight-averaged environmental index in which the weights are the areas of each hydrologic unit code (HUC). The weight average is presented in this EIS as a percentage of historical weight-average.

Habitats that have declined substantially in geographic extent from the historical to the current period — Those cover type-structural stage combinations that have declined by more than 20 percent in more than half of the ecological reporting units (ERUs) where the historical extent is 50 percent of the ERU area or greater and where the overall net change in extent from historical to current periods is negative.

Hierarchy — (1) A ranked or graded series; (2) a sequence of items nested within each other, each smaller than and included within the previous one.

High restoration priority subbasins — Subbasins identified by the ICBEMP as high priority for restoration at the broad scale, where management intent is to concentrate restoration efforts (such as aquatic, water quality, vegetation management, or reestablishing fire) and to make restoration activities more effective and efficient.

Historical period — In this EIS, refers to information recorded during the early decades of Euroamerican settlement of the interior Columbia River Basin, approximately the mid 1800s, prior to major changes caused by this settlement and by subsequent patterns of land and resource use.

Historical Range of Variability (HRV) — The natural fluctuation of ecological and physical processes and functions that would have occurred during a

specified period of time. In this EIS, refers to the range of conditions that are likely to have occurred prior to settlement of the project area by Euroamericans (approximately the mid 1800s), which would have varied within certain limits over time. HRV is discussed in this document only as a reference point, to establish a baseline set of conditions for which sufficient scientific or historical information is available to enable comparison to current conditions.

Hydrologic unit code (HUC) — A hierarchical coding system developed by the U.S. Geological Survey to identify geographic boundaries of watersheds of various sizes.

I

INFISH — Interim Inland Native Fish Strategy for the Intermountain, Northern, and Pacific Northwest Regions (Forest Service).

Inner gorge — A stream reach bounded by steep valley walls that terminate upslope into a more gentle topography. Common in areas of rapid stream downcutting or uplift, such as northern California and southwestern Oregon.

Integration — Bringing the values and systems of different disciplines together to address policy questions with a common framework using consistent techniques and measurement units.

Interagency — Involving Forest Service, BLM, and other federal agencies.

Intergovernmental — Involving federal, state, tribal, county, or other government entities.

Intermittent stream — Any nonpermanent flowing drainage feature having a definable channel and evidence of scour or deposition. This includes what are sometimes referred to as ephemeral streams if they meet these two criteria.

Isolated community — A community located more than 35 to 50 miles from any town with a population greater than 9,000. Communities with populations between about 1,900 and 9,000 are referred to as "isolated trade centers." (See ICBEMP1998 for additional details on how isolated communities were specified.)

Issue — A matter of controversy, dispute, or general concern over resource management activities or land uses. To be considered a "significant" environmental impact statement issue, it must be well defined, relevant to the proposed action, and within the ability of the agency to address through alternative management strategies.

L

Landscape — All the natural features such as grasslands, hills, forest, and water, which distinguish one part of the earth's surface from another part; usually that portion of land which the eye can comprehend in a single view, including all its natural characteristics.

Landscape ecology — The study of the ecological effects of spatial patterns in ecosystems.

Large downed wood — Logs on the forest floor with a large end diameter of at least 21 inches.

Large snag — A standing dead tree with a diameter at breast height of at least 21 inches.

Large woody debris — Pieces of wood that are of a large enough size to affect stream channel morphology.

Lethal (stand-replacing) fires — In forests, fires in which less than 20 percent of the basal area or less than 10 percent of the canopy cover remains; in rangelands, fires in which most of the shrub overstory or encroaching trees are killed.

Long term — Generally refers to a period longer than 10 years. In Chapter 4 of this EIS, refers to the period evaluated by the Science Advisory Group, either at 100 years ('long term') or over an average of 10 decades into the future ('long term average').

M

Maintain — (1) To continue. (2) For this document, the term is intended to convey the idea of keeping ecosystem functions, processes, and/or components (such as soil, air, water, vegetation) in such a condition that the ecosystem's ability to accomplish current and future management objectives is not weakened. Management activities may be compatible with eco-

system maintenance if actions are designed to maintain or improve current ecosystem condition.

Management direction — A statement of goals and objectives, management prescriptions, and associated standards and guidelines for attaining them.

Monitoring — A process of collecting information to evaluate whether or not objectives of a project and its mitigation plan are being realized. Monitoring allows detection of undesirable and desirable changes so that management actions can be modified or designed to achieve desired goals and objectives while avoiding adverse effects to ecosystems.

N

National Ambient Air Quality Standards (NAAQSs) — Standards set by the Federal Environmental Protection Agency for the maximum levels of air pollutants that can exist in the outdoor air without unacceptable effects on human health or the public welfare.

National Environmental Policy Act (NEPA) — An act of Congress passed in 1969 declaring a national policy to encourage productive and enjoyable harmony between people and the environment, to promote efforts that will prevent or eliminate damage to the environment and the biosphere and stimulate the health and welfare of people, and to enrich the understanding of the ecological systems and natural resources important to the nation, among other purposes.

National Forest Management Act (NFMA) — A law passed in 1976 requiring the preparation of Forest Service regional guides and forest plans and the preparation of regulations to guide that development.

Native species — Species that normally live and thrive in a particular ecosystem.

Natural areas — Areas managed by various landowners that are mainly in a natural state and being managed to maintain or restore a degree of naturalness for research, monitoring, inventory, habitat protection, education, or social needs.

New action — Those actions that have not been implemented, or for which contracts have not been awarded, or for which permits have not been issued. (See ongoing action.)

No-action alternative — The most likely condition expected to exist in the future if current management direction were to continue unchanged.

Noxious weed — A plant species designated by federal or state law as generally possessing one or more of the following characteristics: aggressive and difficult to manage; parasitic; a carrier or host of serious insects or disease; or non-native, new, or not common to the United States. According to the Federal Noxious Weed Act (PL 93-639), a noxious weed is one that causes disease or has other adverse effects on man or his environment and therefore is detrimental to the agriculture and commerce of the United States and to the public health.

O

Objective (management) — In this EIS, indicates short-term (10 years or less) and/or long-term (longer than 10 years) outcome(s) that is (are) expected or desired. Objectives are more specific than goals, and they focus primarily on conditions or processes we are trying to achieve or prevent rather than on specific actions or restrictions. Whenever possible, time periods expected to attain the outcome are specified. Actions taken after the ICBEMP ROD is signed must be consistent with the objectives. However, ICBEMP objectives are broad scale; therefore, it is neither expected nor appropriate to achieve each objective to the same degree on every acre of Forest Service- or BLM-administered land in the project area. Also, since objectives focus on conditions and processes, it is possible that specific authorized activities may not individually meet each objective. However, in the long-term (more than 10 years) management actions must move broad-scale resource conditions toward the desired conditions described in the objectives. If actions are moving toward a different condition than is described by the goals or objectives then the agencies are not in compliance with the ROD.

Old forest — (a) *Old single story forest* refers to mature forest characterized by a single canopy layer consisting of large or old trees. Understory trees are often absent, or present in randomly spaced patches. It generally consists of widely spaced, shade-intolerant species, such as ponderosa pine and western larch, adapted to a nonlethal, high frequency fire regime. (b) *Old multi-story forest* refers to mature forest characterized by two or more canopy layers with generally

large or old trees in the upper canopy. Understory trees are also usually present, as a result of a lack of frequent disturbance to the understory. It can include both shade-tolerant and shade-intolerant species, and is generally adapted to a mixed fire regime of both lethal and nonlethal fires. Other characteristics of old forests include: variability in tree size; increasing numbers of snags and coarse woody debris; increasing appearance of decadence, such as broken tops, sparse crowns, and decay in roots and stems; canopy gaps and understory patchiness; and old trees relative to the site and species. See Appendix 17 for details.

Outcome (terrestrial species) — A characterization of the likely distribution and relative abundance of each species across its range in the project area. Two types of outcome are reported in the EIS: environmental outcomes and population outcomes. See Chapter 4, Terrestrial Species Component, for complete discussion.

Outcome-based objectives — Objectives that focus on conditions or processes to achieve or prevent, rather than on specific actions or restrictions.

P

PACFISH — Interim Strategies for Managing Pacific Anadromous Fish-producing Watersheds in Eastern Oregon and Washington, Idaho, and Portions of California.

Patch — An area of uniform vegetation that differs from what surrounds it in structure and composition. Examples might include a patch of forest surrounded by a cut-over area or a patch of dense young forest surrounded by a patch of open old forest.

Pattern — The spatial arrangement of landscape elements (patches, corridors, matrix) that determines the function of a landscape as an ecological system.

Planning area — In this EIS, refers to either the UCRB EIS area or the Eastside EIS area, as defined in the UCRB and Eastside Draft EISs. Together the two planning areas are referred to as the 'project area'.

PM₁₀ — Particulate matter that measures 10 micrometers in diameter or less, a size considered small enough to invade the alveolar regions of the lung. PM₁₀ is one of the six pollutants for which there is a national ambient air quality standard.

Population outcome (terrestrial species) — A characterization of outcome, based on habitat capacity, range extent, and connectivity and which accounts for other influences that could have pervasive effects on a species' population (such as other organisms and small population size). See Chapter 4, Terrestrial Species Component, for complete discussion.

Potential vegetation — Vegetation that would likely develop if all successional sequences were completed without human interference under present site conditions.

Potential Vegetation Group (PVG) — A group of potential vegetation types, grouped on the basis of similar general moisture or temperature environment and similar types of life forms.

Potential Vegetation Type (PVT) — A kind of physical and biological environment that produces a kind of vegetation; the species that might grow on a specific site in the absence of disturbance; can also refer to vegetation that would grow on a site in the presence of frequent disturbance that is an integral part of the ecosystem and its evolution. PVTs are identified by and named for indicator species of similar environmental conditions; for example, the Douglas-fir PVT indicates a cooler and moister environment than the ponderosa pine PVT.

Preferred alternative — The alternative identified in a Draft Environmental Impact Statement which has been initially selected by the agency as the most acceptable resolution to the problems identified in the purpose and need.

Prescribed natural fire — See "Wildland Fire Use for Resource Benefit".

Programmatic EIS — An area-wide EIS that provides an overview when a large-scale plan is being prepared for the management of federally administered lands on a regional or multi-regional basis. A programmatic EIS is a necessary analysis of the affected environment and the potential cumulative effects of the reasonably foreseeable actions under that program or within that geographical area. Analyses of lesser scope or more site-specificity may be tiered to the analysis in a programmatic EIS.

Project area — In this EIS, refers to Forest Service- and BLM-administered lands to which decisions in

the ICBEMP Record of Decision will apply. It encompasses both the “Eastside” and “UCRB” planning areas as described in the Draft EISs, minus the areas excluded from the decision space (see the Project Area section in Chapter 1).

Proper Functioning Condition (PFC) — Riparian and wetland areas achieve Proper Functioning Condition when adequate vegetation, landform, or large woody debris is present to dissipate stream energy associated with high water flows. This thereby reduces erosion and improves water quality; filters sediment, captures bedload, and aids floodplain development; improves floodwater retention and groundwater recharge; develops root masses that stabilize streambanks against cutting action; develops diverse ponding and channel characteristics to provide habitat and water depth, duration, and temperature necessary for fish production, waterfowl breeding, and other uses; and supports greater biodiversity. The functioning condition of riparian and wetland areas is a result of the interaction among geology, soil, water, and vegetation.

Proposed action — A proposal by a federal agency to authorize, recommend, or implement an action.

R

RAC/PAC — Resource Advisory Council/Provincial Advisory Committee areas. Resource advisory councils (RACs) were established by the BLM to provide a forum for non-federal partners to engage in discussion with agency managers regarding management of federal lands. Provincial advisory committees (PACs) were established by the Forest Service, under the Northwest Forest Plan, to provide a forum for non-federal groups and individuals to advise and make recommendations to agency land managers regarding management of federal lands.

Rangeland health — The degree to which the integrity of the soil and the ecological processes of rangeland ecosystems are sustained.

Record of Decision (ROD) — An official document in which a deciding official states the alternative that will be implemented from a prepared Final EIS.

Recovery plan — Identifies, justifies, and schedules the research and management actions necessary to re-

verse the decline of a species and ensure its long-term survival.

Resilient, resilience, resiliency — (1) The ability of a system to respond to disturbances. Resiliency is one of the properties that enable the system to persist in many different states or successional stages. (2) In human communities, refers to the ability of a community to respond to externally induced changes such as larger economic or social forces.

Resource Management Plan (RMP) — A document that provides land and resource allocations, allowable uses, and resource goals, objectives, management actions, and monitoring for the Bureau of Land Management; required under the Federal Land Policy and Management Act.

Restoration — Holistic actions taken to modify an ecosystem to achieve desired, healthy, and functioning conditions and processes. Generally refers to the process of enabling the system to resume acting or continue to act following disturbance as if the disturbances were absent. Restoration management activities can be either active (such as control of noxious weeds, thinning of over-dense stands of trees, or redistributing roads) or more passive (more restrictive, hands-off management direction that is primarily conservation oriented).

Riparian area — Area with distinctive soil and vegetation between a stream or other body of water and the adjacent upland; includes wetlands and those portions of floodplains and valley bottoms that support riparian vegetation.

Riparian conservation area (RCA) — Delineated areas that encompass riparian ecosystems. Management activities in RCAs will be governed by ICBEMP objectives, standards, and guidelines when the Record of Decision is signed.

Riparian ecosystem — An ecosystem that is a transition between terrestrial and aquatic ecosystems; includes streams, lakes, wet areas, and adjacent vegetation communities and their associated soils which have free water at or near the surface; an ecosystem whose components are directly or indirectly attributed to the influence of water.

Risk assessment — Process of gathering data and making assumptions to estimate short- and long-term

harmful effects on human health or the environment from particular products or activities.

Road — *BLM*: A route open normally to highway vehicles (such as trucks and automobiles); route may be improved, is maintained by mechanical means, and receives regular and continuous use; route must have purpose and intent to be maintained when necessary. *Forest Service*: A classified road is at least 50 inches wide and constructed and maintained for vehicle use. An unclassified road is considered a road that was not constructed, maintained, or intended for highway use.

Road density — An indicator of the concentration of roads in an area.

S

Salmonids — Fishes of the family Salmonidae, including salmon, trout, chars, whitefish, ciscoes, and grayling.

Scientific Assessment — Refers to two documents produced by the ICBEMP Science Integration Team: *An Integrated Scientific Assessment for Ecosystem Management in the Interior Columbia Basin and Portions of the Klamath and Great Basins* (Quigley, Graham, and Haynes 1996), which examines historical and current biophysical, social, and economic systems in the project area; and the associated Staff Area Reports (STARs) published as *An Assessment of Ecosystem Components [AEC] in the Interior Columbia Basin and Portions of the Klamath and Great Basins* (Quigley and Arbelbide 1996).

Sensitive species — Species identified by a Forest Service regional forester or BLM state director for which population viability is a concern either (a) because of significant current or predicted downward trends in population numbers or density, or (b) because of significant current or predicted downward trends in habitat capability that would reduce a species' existing distribution.

Site potential — A measure of resource availability based on interactions among soils, climate, hydrology, and vegetation. Site potential represents the highest ecological status an area can attain given no political, social, or economic constraints. It defines the capability of an area, its potential, and how it functions.

Site potential tree height (SPTH) — The average maximum height of the tallest trees (200 years or older) for a given site class.

Snag — A standing dead tree, usually larger than five feet tall and six inches in diameter at breast height. Snags are important as habitat for a variety of wildlife species and their prey.

Source habitat — Those characteristics of vegetation that support long-term wildlife species persistence, or characteristics of vegetation that contribute to stable or positive population growth for a species in a specified area and time. Source habitats are described in Wisdom et al. (in press) using dominant vegetation cover type and structural stage combinations that can be estimated reliably at the 247-acre (100-hectare) patch scale. Various combinations of these cover type-structural stages make up the source habitats for the terrestrial species discussed in this EIS, and provide the range of vegetation conditions required by these species for food, reproduction, and other needs.

Spatial — Related to or having the nature of space.

Special status species — Refers to federally listed threatened, endangered, proposed, or candidate species; and species managed as sensitive species by the Forest Service and/or BLM.

Species — A population or series of populations of organisms that can interbreed freely with each other but not with members of other species.

Species-seasonal combination — Represents a species and the season of year (summer, winter, or year-long) during which it uses source habitat. It also indicates that some species may migrate within or outside the project area. For example: blue grouse use forest mosaic habitat (Family 3) in the summer and broad-elevation old forests (Family 2) in the winter.

Standard (management) — In this EIS, refers to required action, priority, process, or prescription that addresses how to achieve one or more objective(s). Standards can include restrictions on or prohibitions from taking an action in certain situations. Compliance with standards is mandatory.

State Implementation Plan (SIP) — A document prepared by each state describing existing air quality

conditions and measures that will be taken to attain and maintain national ambient air quality standards.

Step-down — In this EIS, refers to the process of applying broad-scale science findings and land use decisions to site-specific areas using a hierarchical approach of understanding current resource conditions, risks, and opportunities.

Stewardship harvest/stewardship thinning — Commercial timber harvest where the primary reason for harvesting timber is to obtain a land use plan objective that requires vegetation manipulation. Therefore, even if the timber could not be sold, the harvest would still take place or be accomplished through another means, such as prescribed fire.

Strongholds (fish) — Watersheds or subwatersheds that have the following characteristics: (1) presence of all major life-history forms (for example, resident, fluvial, and adfluvial) that historically occurred within the watershed; (2) numbers are stable or increasing, and the local population is likely to be at half or more of its historical size or density; (3) the population or metapopulation within the watershed, or within a larger region of which the watershed is a part, probably contains at least 5,000 individuals or 500 adults.

Structural stage — A stage of development of a vegetation community that is classified on the dominant processes of growth, development, competition, and mortality.

Subbasin — A drainage area of approximately 800,000 to 1,000,000 acres, equivalent to a 4th-field hydrologic unit code (HUC). Hierarchically, subwatersheds (6th-field HUC) are contained within a watershed (5th-field HUC), which in turn are contained within a subbasin (4th-field HUC). This concept is shown graphically in Figure 2-1.

Subregional — In this EIS, generally refers to areas geographically smaller than “regional” but larger than a national forest or BLM district. In watershed discussions in this EIS, the term also refers to the equivalent of a second field hydrologic unit code, an area of about 22 million acres.

Subwatershed — A drainage area of approximately 20,000 acres, equivalent to a 6th-field Hydrologic Unit Code (HUC). Hierarchically, subwatersheds (6th-field HUC) are contained within watershed

(5th-field HUC), which in turn contained within a subbasin (4th-field HUC). This concept is shown graphically in Chapter 2.

Succession — A predictable process of changes in structure and composition of plant and animal communities over time. Conditions of the prior plant community or successional stage create conditions that are favorable for the establishment of the next stage. The different stages in succession are often referred to as seral stages.

Sustainability — (1) Meeting the needs of the present without compromising the abilities of future generations to meet their needs; emphasizing and maintaining the underlying ecological processes that ensure long-term productivity of goods, services, and values without impairing productivity of the land. (2) In commodity production, refers to the yield of a natural resource that can be produced continually at a given intensity of management.

T

T — Terrestrial T watersheds (5th-field HUCs) identified by the EIS Team based on whether they contained source habitat for one or more of five “Families” of terrestrial species. These five Families represent groups of species associated with habitats that have declined substantially in the project area since the historical period. In addition, the pattern of source habitats within these watersheds is most similar to that found historically. T watersheds alone do not constitute a network of habitats for terrestrial species; however, they are one piece of the overall strategy to maintain and restore networks of habitat for terrestrial species.

Temporal — Related to time.

Terrestrial communities — Groups of cover types with similar moisture and temperature regimes, elevational gradients, structures, and use by vertebrate wildlife species.

Terrestrial Family — An aggregate of groups of broad-based terrestrial vertebrate species of focus for ICBEMP, organized into “families” based on habitat requirements (Wisdom et al. in press). Twelve Terrestrial Families are discussed in this EIS.

Terrestrial Group — An aggregate of broad-scale terrestrial vertebrate species of focus for ICBEMP, organized into groups based on habitat requirements (Wisdom et al. in press). Forty terrestrial groups were identified.

Threatened species — Species listed under the Endangered Species Act that are likely to become endangered within the foreseeable future throughout all or a significant portion of their range.

Tier — In an EIS, refers to incorporating by reference the analyses in an EIS of a broader scope. For example, a Forest Service project-level EIS could tier to the analysis in a Forest Plan EIS; a Forest Plan EIS could tier to a Regional Guide EIS.

Tribe — Term used to designate any Indian tribe, band, nation, or other organized group or community (including any Alaska Native village or regional or village corporation as defined in or established pursuant to the Alaska Native Claims Settlement Act) which is recognized as eligible for the special programs and services provided by the United States to Indians because of their status as Indians.

Trustee/Trust responsibilities (tribal) — A trustee is one who holds property for the benefit of another. The federal government's trust responsibility arises from promises made in treaties, executive orders, and agreements. The primary focus of the federal government trust responsibility is the protection of Indian-owned assets, natural resources on reservations, and the treaty rights and interests that tribes reserved on off-reservation lands.

U

Unroaded area — Portion of the National Forest System that does not contain classified roads (see Road) that is of sufficient size and configuration that the inherent values associated with an unroaded condition can be

protected. Unroaded areas do not overlap with inventoried roadless areas.

Unstable and potentially unstable lands — The unstable land component includes lands that are prone to mass failure under natural conditions (unroaded, unharvested), and where human activities such as road construction and timber harvest are likely to increase landslide distribution in time and space, to the point where this change is likely to modify natural geomorphic and hydrologic processes (such as the delivery of sediment and wood to channels), which in turn will affect aquatic ecosystems including streams, seeps, wetlands, and marshes.

The following types of land are included: (1) active landslides and those that exhibit sound evidence of movement in the past 400 years; (2) inner gorges; (3) those lands identified as unstable by geologic investigations, using the criteria stated above (includes lands already classified by the Forest Service as unsuited for programmed timber harvest because of irreversible soil loss, and by the BLM as nonsuitable fragile lands). Highly erodible lands (that is, lands prone to sheet and rill erosion) are not included in this definition.

V

Viability — In general, viability means the ability of a population of a plant or animal species to persist for some specified time into the future. For planning purposes, a *viable population* is one that has the estimated numbers and distribution of reproductive individuals to ensure that its continued existence will be well distributed in the planning area.

Viable population — A population that is regarded as having the estimated numbers and distribution of reproductive individuals to ensure that its continued existence is well distributed in the project area.

W

Water Quality Limited — A Clean Water Act classification for waters where application of best management practices or technology-based controls are not sufficient to achieve designated water quality standards.

Watershed — (1) The region draining into a river, river system, or body of water. (2) In this EIS, a watershed also refers specifically to a drainage area of approximately 50,000 to 100,000 acres, which is equivalent to a 5th-field Hydrologic Unit Code (HUC). Hierarchically, subwatersheds (6th-field HUC) are contained within a watershed (5th-field HUC), which in turn is contained within a subbasin (4th-field HUC). This concept is shown graphically in Figure 2-1.

Watershed Condition Indicators (WCIs) — An integrated suite of aquatic (including a biological component), riparian (including riparian-associated terrestrial species), and hydrologic (including uplands) condition measures that are intended to be used at the watershed scale. They are intended to assist in effectiveness monitoring and to indicate the current condition of a watershed in order to help land managers design projects. See Chapter 3, Base Level, Aquatic-Riparian-Hydrologic Component for details.

Weed — A plant considered undesirable, unattractive, or troublesome, usually introduced and growing without intentional cultivation.

Wetland — In general, an area soaked by surface or groundwater frequently enough to support vegetation that requires saturated soil conditions for growth and reproduction; generally includes swamps, marshes, springs, seeps, bogs, wet meadows, mudflats, natural ponds, and other similar areas. Legally, federal agencies define wetlands as possessing three essential characteristics: (1) hydrophytic vegetation, (2) hydric soils, and (3) wetland hydrology. The three technical characteristics specified are mandatory and must all be met for an area to be identified as a wetland. *Hydro-*

phytic vegetation is defined as plant life growing in water, soil, or on a substrate that is at least periodically deficient in oxygen as a result of excessive water content. *Hydric soils* are defined as soils that are saturated, flooded, or ponded long enough during the growing season to develop anaerobic (without oxygen) conditions in the upper part of the soil profile. Generally, to be considered a hydric soil, there must be saturation at temperatures above freezing for at least seven days. *Wetland hydrology* is defined as permanent or periodic inundation, or soil saturation to the surface, at least seasonally.

Widely distributed species — Those species that occur on more than one administrative unit. Widely distributed species may be fine scale or broad scale depending on habitat resolution; however, in this EIS it was possible to disclose specific quantitative effects of the alternatives only on widely distributed species whose habitats could be reliably mapped using a block size of at least 247 acres.

Wide-ranging carnivores — In this EIS, refers to lynx, wolverine, grizzly bear, and gray wolf, which are considered wide-ranging because their territories cover great distances (often more than 50 miles).

Wilderness — Area where the earth and its community of life have not been seriously disturbed by humans and where humans are only temporary visitors. Specific lands may be designated by the U. S. Congress as wilderness areas and protected and managed to preserve their natural condition; “wilderness” can also refer to other areas that have pristine and natural characteristics.

Wildfire — A human or naturally caused fire that does not meet land management objectives.

“Wildland Fire Use for Resource Benefit” — Formerly referred to as “prescribed natural fire.” A fire ignited by lightning but allowed to burn within specified conditions of fuels, weather, and topography, to achieve specific objectives.

Modifications Made to ICBEMP Supplemental Draft EIS

Glossary

Page/Column/Paragraph or Table/Fig/Map/Photo	Change Made (bold = new; strikeout = delete)
2/left	<i>Revise:</i> Add to end of definition of Animal Unit Month : The numbers of AUMs presented in the EIS are <i>authorized AUMs</i> , which in the EIS means the number of AUMs on the yearly billings to permittees.
4/right	<i>Revise:</i> Collaboration -The relationship among the five federal agencies involved with ICBEMP (Forest Service, BLM, National Marine Fisheries Service, U.S. Fish and Wildlife Service, and Environmental Protection Agency [the “interagency partners”]) and with other federal, state, tribal, and local government officials. While shared understanding and commitment to action are the goal, and mutual or consensus agreement is considered appropriate, as appropriate to the geographic area and the issue(s) (the “intergovernmental partners”). While the ultimate goal of collaboration is consensus, collaboration includes can include the a full spectrum of involvement of the parties, such as: <ul style="list-style-type: none">♦ Informing - letting others know what each other is doing the land management agencies are planning or proposing;♦ Coordinating - assuring that efforts are not contradictory minimizing the likelihood that efforts among intergovernmental partners are contradictory;♦ Cooperating - making efforts complementary and synergistic mutually developing shared goals and expectations and increasing the likelihood that efforts of the intergovernmental partners are complementary and synergistic;♦ Mutual goal setting - mutually developing shared goals and expectations;♦ Consensus - mutual support for a course of action among intergovernmental partners for a decision or a course of action while each partner retains statutory and delegated responsibilities.
10/ left	<i>Revise:</i> the definition for Guideline : ...meeting objective(s). Guidelines are not required but are included in the ICBEMP EIS and ROD to provide suggested techniques to meet the objectives. “May”, “can”, or “could” are used in guidelines to indicate that they are suggested techniques, which are optional.

**Page/Column/Paragraphor
Table/Fig/Map/Photo**

Change Made (bold = new; strikeout = delete)

11/right

Add: the definition for **inner gorge**: **A stream reach bounded by steep valley walls that terminate upslope into a more gentle topography. Common in areas of rapid stream downcutting or uplift, such as northern California and southwestern Oregon.**

Revise: the definition of **intermittent streams**: ~~A stream that flows only at certain times of the year when it receives water from other streams or from surface sources such as melting snow.~~ **(e.g. visible signs of bed and bank scour) Any nonpermanent flowing drainage feature having a definable channel and evidence of scour or deposition. This includes what are sometimes referred to as ephemeral streams if they meet these two criteria.**

14/right

Revise: the definition of **objective**: ...attain the outcome are specified.

Actions taken after the ICBEMP ROD is signed must be consistent with the objectives. However, ICBEMP objectives are broad scale; therefore, it is neither expected nor appropriate to achieve each objective to the same degree on every acre of Forest Service- or BLM-administered land in the project area. Also, since objectives focus on conditions and processes, it is possible that specific authorized activities may not individually meet each objective. However, in the long-term (more than 10 years) management actions must move broad- scale resource conditions toward the desired conditions described in the objectives. If actions are moving toward a different condition than is described by the goals or objectives then the agencies are not in compliance with the ROD.

Literature Cited

The Literature Cited section of the Supplemental Draft EIS is incorporated by reference, in accordance with 40 CFR 1500.4(j) and (o), 1502.21 and 1506.4. The incorporated material can be found at the end of Volume 1 of the Supplemental Draft EIS. New or modified references are included here.

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Appendices

The Interior Columbia Basin Ecosystem Management Project Supplemental Draft Environmental Impact Statement (March 2000) included 17 appendices. Less than half of the appendices were modified for the Final EIS. A summary and list of changes for each of the modified appendices are included in the Final EIS.

Modified Appendices

The modified appendices are:

- ◆ *Appendix 3, Public Involvement* (incorporated into Appendix 4)
- ◆ *Appendix 4, Response to Comments*
- ◆ *Appendix 6, Terrestrial and Aquatic Species*
- ◆ *Appendix 7, Socio-Economic Information for Counties and Communities*
- ◆ *Appendix 9, Additional Aquatics Guidance and USFWS and NMFS Matrices*
- ◆ *Appendix 10, Implementation Framework*
- ◆ *Appendix 12, Requirements for Snags and Downed Wood*
- ◆ *Appendix 16, SAG Assumptions for Modeling the Supplemental Draft EIS Alternatives*
- ◆ *Appendix 17a, Definitions for Old Forest*

New Appendix

One new appendix is included in the Final EIS—*Appendix 18, A1 and A2 Subwatershed Update Process*.

Unmodified Appendices

The appendices that were not modified are incorporated by reference, in accordance with 40 CFR 1500.4(j) and (o), 1502.21 and 1506.4. The content of the unmodified appendices is briefly summarized here. These appendices (as well as the full text of the modified appendices) can be viewed on or downloaded from the ICBEMP website (www.icbemp.gov) or obtained by contacting the ICBEMP office, 304 North 8th Street, Boise, ID 83702; telephone (208) 334-1770, fax (208) 334-1769.

Appendix 1, Scientific, Legal, and Planning Background, (10 pages) provides an overview of the major scientific studies that contributed to the development of the Interior Columbia Basin Ecosystem Management Project EIS. It also lists the major laws and executive orders that constitute the legal framework for planning and management of lands administered by the BLM and Forest Service. The last portion of this appendix includes planning considerations that underlie planning efforts of the BLM and the Forest Service and lists the land use plans currently in effect in the ICBEMP project area.

Appendix 2, GIS Data and Databases, (22 pages) describes the development of the ICBEMP inter-agency Geographic Information System (GIS) data and databases. This appendix, adapted from the Information System chapter (Gravenmier et al. 1997) of the *Scientific Assessment* (Quigley and Arbelbide 1997), contains sections on GIS data layers or themes, documentation, management, and data sharing. A table lists all the data layers in the GIS used for the ICBEMP.

Appendix 5, Terrestrial Source Habitat Acreage Table, (10 pages) is a table of data for the terrestrial source habitats used by the 91 terrestrial vertebrates in the 12 Terrestrial Families described in *Source Habitats for Terrestrial Vertebrates of Focus* (Wisdom et al. 2000). Historical and current acreages are presented for each terrestrial source habitat for the basin (not including the Greater Yellowstone Area). Terrestrial source habitats that were identified by the EIS Team as having declined substantially in geographic extent from the historical to the current period are marked in the table.

Appendix 8, Tribal Background Information, (110 pages) contains information about the 22 American Indian tribes that have reservations, ceded lands, and areas of interest within or bordering the project area. Part A is presented in three sections: Summary of General Information Sheets; Evaluating Habitat and Harvestability, and Addressing American Indian Rights and Interests; and Government-to-Government Consultation with American Indian tribes. Part B provides further details on federal court cases with applications for multiple tribes, individual information sheets for each of the affected tribes in the project area, a chronology of the legal status of American Indian tribes, a list of Tribal Employment Rights Ordinance (TERO) contacts, and a discussion of ethno-habitats.

Appendix 11, Integrated Weed Management, (6 pages) presents seven goals of an integrated weed management (IWM) strategy, and provides noxious weed control guidelines for an IWM strategy.

Appendix 13 is a rangelands appendix (16 pages) presented in two parts. Part A, Biological Crust Evaluation, describes the use of a matrix to analyze

the effects of livestock grazing on biological crust in a NEPA document. Part B, Healthy Rangelands Standards and Guidelines, is a reprint of the Standards for Rangeland Health and Guidelines for Livestock Grazing Management (August 12, 1997), known as the Healthy Rangelands Initiative, for BLM-administered lands in Idaho, Montana, and Oregon/Washington.

Appendix 14, EIS Team Guidance to SAG, (28 pages) is the guidance that the EIS Team provided to SAG to assist them in modeling the effects of Alternatives S1, S2, and S3. It is based on the management intent and direction for BLM- and Forest Service-administered lands, described in Chapter 3 of the Supplemental Draft EIS.

Appendix 15, Development of Restoration Priorities, (32 pages) describes the developmental steps of the restoration strategy within Alternatives S2 and S3. It discusses restoration components and willingness to accept risk from restoration actions. It contains an explanation of the rulesets used to develop functional (for example, aquatics or economics) restoration priorities and the high restoration priority subbasins.

Appendix 17, is an old-forest definitions appendix (approximately 266 pages) presented in two parts. Part A, Definitions for Old Forest, has been modified and therefore is included in the Final EIS. Part B, Regional Definitions for Old Forest, contains three old-growth (old forest) definitions developed by the Forest Service Pacific Northwest, Northern, and Intermountain regions.

Appendix 4

Public Involvement/ Response to Comments

Appendix 3 and Appendix 4 of the Supplemental Draft EIS are incorporated by reference, in accordance with 40 CFR 1500.4(j) and (o), 1502.21 and 1506.4. The incorporated material can be found on pages 3-1 through 4-138 in Volume 2 of the Supplemental Draft EIS. Appendix 3 and Appendix 4 are briefly summarized below, followed by the comments and responses on the Supplemental Draft EIS.

Summary of Appendix 3 and Appendix 4

The Interior Columbia Basin Ecosystem Management Project (the project, ICBEMP) was chartered by the Director of the Bureau of Land Management (BLM) and the Chief of the Forest Service in January 1994. The project charter directed that the development of an ecosystem management strategy be a multi-agency effort involving the public in an open process. In its commitment to an open process, the project involved people early and often, shared information as it became available, and used both traditional and non-traditional methods to reach a

wide spectrum of people interested in the management of public lands.

Collaboration, interaction, and consultation occur with other federal, state, county, and tribal government officials, and with special interest groups, interested individuals, and the general public. Hundreds of public meetings were held throughout the project, and there were innumerable briefings, conference calls, collaborative intergovernmental working meetings, and on-on-one information exchanges.

In June 1997, the Eastside and Upper Columbia River Basin Draft Environmental Impact Statements (EISs) for the ICBEMP were released for public review, initiating a formal 120-day comment period. The comment period was extended several times and lasted a total of 335 days, ending in May 1998. Approximately 82,895 letters and internet responses were received on the Draft EISs. The comments were recorded and consolidated by the Content Analysis Enterprise Team, an independent team made up of federal employees.

In March 2000, the ICBEMP Supplemental Draft EIS was released for public review, initiating a formal 90-day comment period. Appendix 3 of the Supplemen-

tal Draft EIS summarizes the public involvement activities from the inception of the project through the public comment period on the Draft EISs, ending in May 1998. These included: scoping, issue identification, Draft EIS alternative development, public briefings and presentations (1994-1997), and sources of public information. Appendix 3 also contains a summary of public involvement efforts from May 1998 to the release of the Supplemental Draft EIS, and it concludes by outlining opportunities for future public involvement in project development and implementation.

Appendix 4 of the Supplemental Draft EIS presents the consolidated public comments on the Draft EISs and responses developed by project staff. They are divided into three major topic areas: comments related to the proposed action and purpose and need statement, comments related to biophysical components of the ecosystem, and comments related to social-economic-tribal components of the ecosystem.

Appendix 4 of this Final EIS updates Appendix 3 and Appendix 4 by summarizing public involvement efforts from March to November 2000 and by presenting the consolidated public comments on the Supplemental Draft EIS and the responses developed by project staff.

Public Involvement Efforts

Public Briefings and Presentations (March to November 2000)

Project Briefings and Consultations

Meetings, briefings, and consultations with individuals, agencies, and organizations were held throughout the development of the Final EIS. Table 1, at the end of this appendix, lists significant contacts made since the Supplemental Draft EIS was released in March 2000. The list is not exhaustive. Numerous

internal briefings, collaborative intergovernmental working meetings, and on-on-one consultations with members of the public have occurred.

Special Presentations

Project staff gave approximately 60 special presentations in response to requests from other federal agencies, state, county, and tribal governments, forest and rangeland user groups, conservation and environmental organizations, professional societies, and civic organizations. More than 100 people attended the various presentations.

Tribal Discussions

Since March 2000, individual contacts with the 22 tribal governments and their representatives were made. These contacts were designed to provide a transition to the step-down process. Local BLM and Forest Service line managers were assigned as lead contacts to engage tribal dialogue concerning the Supplemental Draft EIS. The goal of the contact was to make sure that the tribes were informed about the changes being made to complete a Final EIS and the timelines. In addition, informal contact was made with key tribal staff. Project information was mailed, then followed by multiple telephone contacts to assure documents were received and to determine the desire for meetings. The Tribal Working Group has not met during the time after release of the Supplemental Draft EIS.

At the same time the project was working towards completion, the Federal Caucus was also formally and informally consulting with the tribes on the "All-H" strategies. With a focus on the interagency All-H strategies addressing hydropower systems management in the Columbia River basin, tribal interaction with federal agencies in the region were largely focused on review drafts of that process. Several meetings were conducted directly concerning ICBEMP and the Supplemental Draft EIS, however. These primarily involved the Warm Springs (October), Umatilla (November), Ft. McDermitt Paiute (August), and Ft. Bidwell Paiute (July) tribal governments. In several cases, such as the Klamath Tribes, Yakama, and the Colville tribes, written comments were submitted in place of a meeting according to the desires of the tribes. Although no specific meeting was requested concerning ICBEMP specifically, the Supplemental Draft EIS was the subject of more general meetings

with the tribes or meetings addressing related issues such as development of local land use plans and other activities, such as with the Duck Valley Shoshone-Paiute. Most tribal interaction came in the context of All-H tribal meetings, including the upper Columbia River Basin tribes involving the Coeur d'Alene, Spokane, Kootenai (of Idaho), and other tribes.

Sources of Project Information During Final EIS Development (March to November 2000)

Mailing List, Newsletters, and Mailers

The project mailing consists of nearly 14,000 names. People whose names were on the list received notices of upcoming meetings, newsletters, draft documents, and EIS mailers. Names of meeting participants and others who contacted the project offices were added to the list.

The project communications staff published a periodic newsletter (*Leading Edge*), electronically to Forest Service and BLM employees and hard copy to those on the mailing list. The newsletter kept people updated on the progress and contents of Science Team and EIS Team efforts and documents. From March through November 2000, three issues of the project newsletter were published and distributed.

Project Information Binder

The project information binder initiated following the Draft EISs continued to be updated and available at local Forest Service and BLM offices and public libraries throughout the project area. The binders included general background on the project, meeting notes, draft documents, and newsletters.

Electronic Library / Internet / Toll-free Telephone Number

An electronic library instituted in 1994 continued to be updated and accessible on the Internet through the ICBEMP website (<http://www.icbemp.gov>). The website contains full versions of the Eastside and UCRB Draft EISs, the Supplemental Draft EIS, project newsletters, news releases, a powerpoint

presentation on the Supplemental Draft EIS, and other project information such as questions and answers (Q&As) and the project history.

Responses to Public Comments

Introduction

In March 2000, the ICBEMP Supplemental Draft EIS was released for public review, initiating a formal 90-day comment period on the EIS. In April 2000, the Report to the Congress on the Interior Columbia Basin Ecosystem Management Project (Report to Congress) was provided to the U.S. Congress and released for public review, initiating a formal 120-day comment period on the report.

A total of 528 responses were received on both the Supplemental Draft EIS and the Report to Congress, with only a few specifically limiting their remarks to the Report to Congress. Comments were analyzed and subsequently consolidated by a content analysis team convened by the project, and responses were developed by project staff. They are organized in this appendix into three major topic areas: comments related to the proposed action and purpose and need statement, comments related to biophysical components of the ecosystem, and comments related to social-economic-tribal components of the ecosystem.

The comments were read and coded based on content and intent, and then re-read and coded by a second analyst to reduce subjectivity and promote consistency in coding. Each comment was given a unique tracking number and entered into a database. The public comments were then categorized and summarized and are reported in the *Final analysis of Public Comment for the ICBEMP Supplemental Draft EIS*.

Of the total responses received on either the Supplemental Draft EIS or the Report to Congress, approximately 370 were from inside the project area. Nearly 400 were submitted from individuals or families, with the remaining comments coming from a variety of organizations including: interest groups; businesses; federal, state, county, and local government agencies;

The Content Analysis Process

Content analysis is a process that objectively and systematically identifies, summarizes, and describes written or oral public comments in a format that staff and decision makers can use to make recommendations and decisions. Content analysis helps the EIS Team clarify, adjust, or use technical information, as required by National Environmental Policy Act (NEPA) regulations.

The purpose of content analysis is to display and describe what the public said as completely and accurately as possible. Both the number and quality of public input serve to identify public values, preferences, and possible acceptable tradeoffs. The approximate measure of public opinion and values afforded by content analysis can then be weighed against other decision-making factors. Knowledge of how various people and groups feel about issues and proposals contributes to decisions that are based on better understanding of the balance of values expressed in the comments.

Several types of content analysis provide quantitative and qualitative ways to analyze and evaluate comments. The type of content analysis used by this team captures opinions and supportive reasons for the comments together, summarized by the team and supported by sample quotations in the respondents' own words.

elected officials; tribal governments; and professional societies.

Approximately 212 responses were from organized response campaigns, including: petitions, postcards, resolutions, comment forms, and form letters. More than 90 responses came from emails or the web page.

Every comment was considered in this content analysis process, whether it came repeatedly from many people saying the same thing or from a single person bringing up a technical or personal point. Emphasis was placed on the content of the comment rather than the number of times a comment was received. All comments can be tracked to the original letter and can be sorted and reported in a variety of ways. The numbers can be derived from the database if desired.

The results of the content analysis were critical to the development of the Final EIS. Following are the consolidated comments and the responses developed by the project staff. This appendix contains for the most part only those substantive comments that did not result in a direct change to the EIS analysis, alternatives, or chapters. Comments that contributed to such changes are documented in Chapters 1 through 5 of the Final EIS.

Proposed Action, Purpose and Need

Purpose and Need

Comment: *Why recommend a change, when all alternatives provide for the same conditions as to water quality, aquatic species, and terrestrial vegetation in the long term? The purpose and need of the ICBEMP effort is clearly being met by existing planning and management activities, and these programs should not be disrupted.*

Response: Some of the projected differences in effects among alternatives are as follows (page references are all to Chapter 4 of the Supplemental Draft EIS):

- ♦ Alternative S2 would better maintain and restore soil productivity, hydrologic functions, and watershed processes than Alternative S3, followed by Alternative S1 (page 11).
- ♦ Effects from uncharacteristic wildfire are expected to increase slightly under Alternative S1 and decrease in Alternatives S2 and S3 (page 39).
- ♦ Alternative S2 would result in better conditions for terrestrial vertebrates than Alternative S3, followed by Alternative S1 (page 76).
- ♦ In the long term (100 years) all three alternatives are predicted to improve water quality conditions, and Alternative S2 is predicted to have the most positive influence on water quality (page 113).
- ♦ The largest increase in aquatic habitat capacity would come from Alternative S2 (page 113).
- ♦ Uncharacteristic wildfire effects on vegetation and soils would steadily decline under all alternatives on rangelands; the most substantive im-

provement is projected under Alternatives S2 and S3, and least improvement in Alternative S1 (page 187).

Comment: *The Plan fails to adequately consider the social and economic needs of people.*

Social and economic needs are considered as negative effects instead of parts of ecosystems to be managed.

Response: The purpose and need statement in Chapter 1 of the Supplemental Draft identifies support of social and economic needs of people, cultures, and communities as a primary purpose of ICBEMP. Social and economic needs are recognized as components of ecosystem management that must be provided for in a predictable and sustainable manner. While providing for protection and restoration of ecosystems and habitats for threatened and endangered species is a major focus of the plan, protection and restoration measures have been designed to minimize impacts on major human uses such as timber harvest, grazing, and recreation.

In the Supplemental Draft EIS, forestland restoration actions that involve timber harvesting will actually increase the amount of wood fiber available for commercial use by up to 20 percent in the first decade (see Chapter 4, page 150, Table 4-35). Rangeland restoration actions are specifically aimed at improving rangeland ecosystem structure and processes, rather than taking the path of requiring a specific reduction in the amount of grazing authorized on BLM- and Forest Service-administered lands (Chapter 4, page 147). Forest and rangeland restoration projects, including prescribed fire and fuels reduction, are expected to increase related employment by almost 2,700 jobs annually basin-wide under the proposed action.

In addition, management objectives require the agencies to give highest priority to conducting restoration activities near rural and tribal isolated and economically specialized communities that often have lower socio-economic resilience and a greater need for assistance during periods of economic transition (Objectives B-O56 and R-O34, Chapter 3).

Comment: *When proposing to "...support economic and social needs of people, cultures and communities...", recognize that different types of economies may conflict (e.g., fishing vs. timber/grazing).*

Response: The core of the ICBEMP process and proposed action is to sustain and improve environmental and ecological conditions on Forest Service- and BLM-administered lands in the basin. Healthy ecosystems should provide more opportunities that are sustainable over the long run for all types of economies. The objectives and standards in the Final EIS are written to recognize the need for flexibility in identifying and considering local conditions and needs (through the step-down process) and to encourage and facilitate collaboration among government and private entities to find common ground and develop workable solutions.

Comment: *The purpose statement serves as the critical gatekeeper role in that it sets forth the evaluating criteria to judge between alternatives. Unfortunately, in this case, the stated purposes offer only limited ability to choose between alternatives. One of the stated purposes of the proposed action was to "identify where current policy regulation or organization structure may act as challenges to implementing the strategy or achieving desired conditions." Aside from the inherent error in classifying this as a purpose, we are unable to find where any of the alternatives address this issue. We suggest that juxtaposition of planning for this scale and identification of policy regulations, statutes or structural impediments to this scale of planning be analyzed. These issues should be addressed prior to the Record of Decision (ROD).*

Other "purposes" that are not actually "purposes" include: amending plans, providing consistent direction, and emphasizing adaptive management. None of these alleged purposes are useful in judging between alternatives.

Response: There are multiple components to the purpose statement in Chapter 1 of the Supplemental Draft EIS other than the identification of administrative and organizational barriers that may need changing. As stated on page 10, the purpose of the proposed action is to take a coordinated broad-scale approach and to select a management strategy that best achieves a combination (emphasis added) of the identified nine topics. As stated on page 17 of Chapter 1, most of the decisions in the ROD will focus on regional and subregional issues that can be addressed by the amendment of land use plans. The first part of the ROD will address other commitments (other than land use plan direction commitments) that the regional executives may need to make to implement the direction, such as establishing MOUs

and agreements on administrative aspects such as budget development procedures.

Ecosystem Management

General

Comment: *The document is biased in favor of resource extraction and ignores public support for an end to commercial logging and other extractive actions on national forests.*

Response: The proposed decision in the Final EIS responds to the purpose and need and the five goal statements established early in the planning process. A complete prohibition of commercial logging and other extractive actions is outside the scope of this project, as well as the various laws and regulations applicable to management of Forest Service and BLM-administered lands. Within these parameters, the Final EIS focuses on restoring and maintaining ecosystems across the project area and providing for the social and economic needs of people, while reducing short- and long-term risks to natural resources from human and natural disturbances. In addition to promoting the broad-scale restoration and maintenance of ecosystems, conservative direction is also provided to further promote the protection of specific subwatersheds containing important fish populations and specific watersheds containing important terrestrial source habitats and to expand these areas through restoration actions.

Comment: *ICBEMP ought to leave the door open for the creation of large preserves, even to the point of a "hands-off" management approach to these already intact, undisturbed areas.*

Response: In addition to the three alternatives analyzed in the Supplemental Draft EIS, all of the alternatives in the Draft EISs, including Alternative 7 (which establishes large preserves throughout the basin, called "reserves") are still available for the project's Executive Steering Committee (ESC) to select from in developing the Record of Decision. Prior to signing the record of Decision, the ESC will consider the comparative effects of the alternatives, including their effectiveness at achieving the overall purpose and need and goals for the action, as supported by the EIS analysis, the Scientific Assessment, and other science findings relative to the alternatives.

The Scientific Assessment analyzed the potential effects of passive management. The Science Team found that in disturbance ecosystems, not taking action can cause negative effects on fish, wildlife, and other important values from uncharacteristic fire, noxious weeds, or diseases in particular situations. To implement passive management, except for fire exclusion, could push the ecosystems into further departure, while escalating fire risk due to increased fuel loads, development of fuel ladders, development of over-dense forests and rangelands, and stressed forests leading to insect and disease problems, mortality, and even higher fire risk.

Comment: *There is an overemphasis on social-economics and an underemphasis on returning the ecosystem to health.*

Response: The proposed decision responds to the project's purpose and need, as well as all of the goals which were brought forward unchanged from the Draft EISs. The Final EIS focuses on four basic components: (1) landscape succession/disturbance, (2) terrestrial species habitat, (3) aquatic habitat, and (4) human needs, products and services. In addition to promoting the broad-scale restoration and maintenance of ecosystems, conservative direction is also provided to further promote the protection of specific subwatersheds containing important fish populations and specific watersheds containing important terrestrial source habitats and to expand these areas through restoration actions and reducing short- and long-term risks to natural resources from human and natural disturbances.

Comment: *The ICBEMP removes protections that currently exist.*

Response: The Final EIS provides several levels of direction, some of which will directly supercede elements of existing land use plans and some which will augment corresponding land use plan direction. In addition, the proposed decision replaces interim strategies with long-term management direction. Existing land use plan elements not affected by this new direction, including many protective measures, will remain in effect. The Final EIS is based on the Scientific Assessment and subsequent science findings that have shed light on factors contributing to broad-scale cumulative effects relative to forest and rangeland health and special status species.

Ecosystem Health and Ecological Integrity

Comment: *This ecosystem-based approach to federal land management is needed to address the significant forest and grassland health, fish and wildlife and social economic issues facing this region.*

Response: The Final EIS continues with the development of an ecosystem based strategy to support social and economic needs of peoples, cultures and communities, and to provide sustainable and predictable products and services from Forest Service- and BLM-administered lands.

Comment: *If and when "restoration" is attained, what happens then? How will these open park-like forests be managed at that point? How will they be maintained?*

Response: Once landscapes have been restored to a desired mix of vegetation types (habitats), they will be managed in a dynamic way to maintain a range of habitat types across the landscape. For instance, open, park-like stands of ponderosa pine may be maintained through natural and prescribed fire, thinning, and harvest. See the rationale in B-O30 for a more in-depth description of the intent for management of old forests in both the short and long terms.

Comment: *Any reduction in cover of native species or biological crusts, any reductions in fine fuels in shrublands, any increase of weed cover, or any increase in soil disturbances should result in a reduction in livestock grazing, off road vehicle use, and logging until the lands begin to recover.*

Response: The Scientific Assessment found that there are multiple risks to ecological integrity and economic well-being, and these risks must be recognized and managed. Risks and opportunities differ significantly across the project area, and any landscape strategy dictating a one-size-fits-all prescription will not take advantage of this wide degree of variability. The description of desired outcomes from public land is outlined in the Supplemental Draft EIS on page 3-53: "Where ecosystems are in good condition, management direction requires that they remain in good condition. Where ecosystem conditions are not as good, the intent of direction is to keep the conditions from deteriorating further until they can be actively or passively restored." Local managers would then

determine the best method for realizing these objectives. This may or may not result in changes in use.

Comment: *Ecosystem health and ecosystem integrity are value-laden terms lacking a scientific basis.*

Response: The terms ecosystem health and ecosystem integrity are defined in the Supplemental Draft EIS (page 2-251) and are derived from science publications (Quigley et al. 1997, Hemstrom et al. 2000).

Comment: *The statement in Chapter 4 regarding ecosystems moving away from historical conditions is inconsistent with the discussion of "positive ecological trends" in Chapter 2.*

Response: The discussion in Chapter 4 refers to the momentum of succession that is driving ecosystem changes. In Chapter 2, the "positive ecological trends" refer to some of the improvements in management techniques and understanding that have taken place in the last several decades.

Comment: *It is not stated what the units of landscape health are, nor is it stated if they represent the same number of units. For example do the categories all have the same size?*

Response: The units of landscape health are properly functioning ecosystem processes within a watershed hierarchy. Landscape health can be measured in a number of different ways and unless the processes and functions are operating within a healthy range, the ecosystem cannot be considered truly healthy. Ecosystem processes include plant succession and change, soil build up and protection, hydrologic functioning as it relates to streams erosion and deposition, and many other identified in Chapter 2 of the Supplemental Draft EIS.

Comment: *There appears to be little relationship between these twelve "critical watersheds" (identified in the All-H Strategy) and the 40 high restoration priority subbasins and important fish populations in A2 subwatersheds in the Supplemental Draft EIS. The Final EIS and Record of Decision must explain how habitat restoration priorities were identified, performance standards defined, and how the multiple federal salmon protection policies and processes work together.*

Response: The watersheds identified in the Federal Caucus's "Draft Basin-wide Salmon Recovery Strategy" (July 27, 2000) also known as the "All-H Strategy" and the 40 high restoration priority subbasin identified in ICBEMP and important for fish populations were identified using different criteria. The 40 high restoration priority subbasins are established to help focus restoration activity at the broad-scale, and to focus restoration funding as a strategy to be efficient and effective from the broad scale. This is different from the "critical watersheds" which were identified to protect these watersheds from short term risk to listed species. This "restoration" approach is explained in Chapter 3 under the topic "Aquatic/Riparian/Hydrologic Restoration" and in the Chapter 3 section on Management Direction–Restoration: Description and Management Intent. "Performance standards" is a concept that is evolving from the All-H Strategy; standards are not a topic for land use planning. Instead, the ICBEMP is focusing on measurable ways of monitoring and assuring effectiveness of direction towards explicit goals.

Comment: *The development and constant flux of the federal All-H Strategy has resulted in a "moving target" for groups trying to gauge federal recovery efforts. At this time, we do not know whether the project's restoration priorities or Bonneville Power Administration's "anything but hydro" approach will apply.*

Response: Federal land managers remain active participants in the Federal Caucus All-H process. The federal habitat component of the All-H Strategy continues to be the direction that will guide federal land management from ICBEMP. The ICBEMP science is the best and most current available information about the contribution of federal lands towards the habitat needs of listed anadromous fish species.

Tradeoff / Balance

Comment: *Timber harvest should be an integral component of this ecosystem management project since it offers a key tool in resolving forest health problems, in maintaining healthy ecosystems, and facilitating vibrant economies.*

Response: Forest thinning is a tool that can be used as part of a forest restoration strategy. Periodic natural disturbance has been integral to ecosystem processes and functions. Fire has been taken out of many of these ecosystems and must be returned where possible. However, in some areas, fuel loads

have increased to a stage where using prescribed fire can only be accomplished safely after thinning reduces the fuel loads and removes fuel ladders. Although thinning does not contribute all of the benefits of fire, in some locations where dangers from fire are too great, thinning may be the best activity available to replace fire. Timber harvest also provides economic benefits to the people of the Basin.

Comment: *It is inappropriate for this document to focus on short-term economic gains of resource extractive industries over the long-term economic and ecological health of the region. Public land managers must not underestimate the devastating economic impact of declining fisheries, poor water quality, and lost recreation and tourism that result from resource extractive industries.*

Response: The proposed action establishes to balance the risks from management with the benefits from economic gains to communities. The Scientific Assessment provided the basis to look at the various risks and opportunities for actions that could be taken. There are tradeoffs and benefits, and these should be looked at in an integrated fashion, rather than one topic at a time or one issue at a time. This is what ecosystem management strives to accomplish. For example, the risk to an ecosystem from catastrophic events or the spread of noxious weeds (which could result in a higher loss of fish species or terrestrial wildlife habitat) may be higher than the risk to the same ecosystem from restoration activities.

The direction includes statements of intent, guidelines, and standards that are designed to protect and promote the ecological health of the basin, such as: Riparian Conservation Area direction, snag and coarse woody debris requirements, and old forest direction. In addition, the step-down process (Subbasin Review, EAWS, land use planning, and project level planning) are collaborative processes that allow managers to assess finer scale risks and provide information and public comment opportunities to inform the local decisions.

Comment: *It is unclear how conflicts at the local level will be resolved. How will decisions be made based on conflicting ecological, socio-economic, and tribal concerns?*

Response: Conflicts at the local level will be resolved by local managers as they evaluate risks through the step-down process. The Supplemental Draft EIS has a priority system for application of management direction: threatened and endangered

species direction, Riparian Conservation Area direction, A1 subwatershed direction, terrestrial watershed direction, A2 subwatershed direction, restoration direction, and other base-level direction. These layers of direction work together in a hierarchical manner to reduce conflicts in management direction.

Comment: *The proposal removes current guidelines and protections for old-growth forests and riparian areas and replaces them with logging.*

Response: The ICBEMP identified in the project charter that a purpose of the project was to replace the interim strategies of PACFISH, INFISH, and the Eastside Screens with a long-term, ecosystem based strategy. In addition, court decisions state that these strategies would be replaced. This intent is explained in Chapter 1 of the Supplemental Draft EIS. (See Requirements or Authority for New Long-term Management Direction.) The analysis of the effects of the interim strategies (and some others) is included in the Alternative S1, the no-action alternative in the Supplemental Draft EIS. Components of the strategies have been incorporated into the action alternatives, when they fit the overall theme of the alternative.

The Supplemental Draft EIS proposes both restoration and protection measures for riparian areas and old forests. Thinning is a restoration tool that could be used in these areas only if it maintains or promotes the ecological health of these important areas.

Comment: *The plan does not address off-road vehicles.*

Response: Use and management of off-road vehicles is an issue better addressed at the local BLM District and National Forest level.

Manage to Preserve Natural State

Comment: *Large landscapes, forests, and primary watersheds have been subject to abusive logging, road building and grazing and should be set aside to heal naturally, without management intervention.*

Response: The Scientific Assessment analyzed the potential effects of passive management (Quigley et al. 1997). The science team found that in disturbance ecosystems, not taking action can cause negative effects on fish, wildlife and other important values from uncharacteristic fire, noxious weeds, or diseases

in particular situations. To implement passive management, except for fire exclusion, could push the ecosystems into further departure, while escalating fire risk due to increased fuel loads, development of fuel ladders, development of over-dense forests and rangelands, and stressed forests leading to insect and disease problems, mortality, and even higher fire risk.

Comment: *Where is the scientific data that show riparian areas and rangelands will recover faster with livestock grazing than without it? Where is the monitoring plan to validate that the preferred alternative is needed, where is the monitoring plan to validate that the preferred alternative after it has been implemented, and where are the control areas to make sure this massive experiment is sound?*

Response: The science-based strategies on which the proposed action was built focus on the multiple risks to ecological integrity and economic well-being that must be managed across the basin; they also emphasize the fact that risks and opportunities differ significantly across the basin, and that linkages exist among various scales. The selected strategies did not establish that any one use would have to be dominant over all other uses or be achieved at a rate that far surpasses other activities.

The emphasis for science, which was built upon in the management direction, is that uncharacteristic livestock grazing can have negative effects and deter ecosystem restoration. The rate of restoration of lands back into a pattern more consistent with historical variation would take time.

Monitoring strategies to assure implementation is occurring as planned and is effective, are identified in Appendix 10 of the Final EIS.

Comment: *Since the Supplemental Draft EIS acknowledges the problems associated with cattle grazing, why isn't an alternative that removes cattle from the rangelands analyzed?*

Response: A management strategy that is single issue focused (such as to eliminate all livestock grazing from federal land) is inconsistent with the purpose and need for the project. Instead, the project focused on management strategies that would prevent uncharacteristic livestock grazing and initiate strategies that would restore these lands into a pattern more consistent with historical variations in vegetative conditions. The science also identified that the

primary impact from livestock grazing most likely occurred from between 1880 to 1940.

Manage for Multiple Use

Comment: *Our forests are renewable resources. This proposed plan causes severe restrictions on use of many of our forests. We need to go back to the original purpose and need of why the Forest Service was initially established: to provide goods and services to the American people. Multiple use must remain a major part of any policy to manage public lands.*

This document leads us to believe that the decision was made to abandon multiple-use in favor of ecosystem management.

Response: The Supplemental Draft EIS provides for multiple uses of BLM- and Forest Service- administered lands in the project area. Areas in need of restoration have been identified and prioritized. Restoration will promote the ecological health of that area and where possible, provide socio-economic benefits to surrounding communities. The direction in the proposed action is consistent with BLM and Forest Service authorities for multiple use and sustained yield resource management of these federal lands.

The accepted definition for ecosystem-based management is the application of ecosystem concepts to achieve multiple-use management of public lands by blending the needs of people and environmental values in such a way that Forest Service- and BLM-administered lands represent diverse, healthy, productive, and sustainable ecosystems.

The Final EIS is consistent with multiple-use management.

Restoration

Comment: *Alternative 4 of the 1997 Draft EIS promotes aggressive restoration and restores 39 million acres in a decade. Under the Supplemental Draft EIS it would take nearly 25 years to treat lands at risk. Why didn't the Supplemental Draft EIS address the issues brought up by the "cohesive strategy"?*

Response: The Supplemental Draft EIS prioritized restoration to conform to budget constraints. With increased budgets, greater restoration is possible. The Supplemental Draft EIS focuses attention on those

areas where the greatest gains can be made in the most efficient manner.

The "cohesive strategy" is a policy paper for the Forest Service that identified policy options across all the National Forest lands in the western United States to address potential wildfire problems. The "cohesive strategy" was built on some of the same science as ICBEMP and used coarse, broad-scale information for its analysis. The "cohesive strategy" policy document and ICBEMP are not in conflict with each other in their analysis of the problem and their proposed solutions.

Comment: *Each National Forest should be assigned a guidance-only target for restoration. These targets would inform each forest of the level they need to achieve in order to make real progress toward restoration.*

Response: The Record of Decision will replace interim strategies (PACFISH, INFISH, and Eastside Screens) with a broad-scale plan that will not only conserve the scarce species, habitats, and other resources, but will also restore ecosystem health in an integrated manner. It is not possible, however, to assign targets in a broad-scale plan that apply to fine-scale field units. It is up to local land managers to determine the most effective manner to achieve the project's broad-scale objectives. Local managers will use a series of analyses to inform these local decisions.

Comment: *Prove that active restoration works on a small scale before you apply it on a large scale.*

Response: The Scientific Assessment identified the types of restorative actions needed to manage these types of disturbance-based ecosystems. The primary outline for this is the discussion: "A Framework for Ecosystem Management of the Interior Columbia Basin (Haynes, Graham and Quigley 1996). More detailed discussion is in Hann, Jones, Karl, et al. (1997) which shows that active ecological management (active) was effective at restoring ecosystem health while traditional reserve (passive) and traditional commodity management were not. They predicted that using passive management would require 2 to 4 severe disturbance cycles to restore a healthy forest ecosystem.

Comment: *How will budgets be shifted to drive projects in high restoration priority subbasins?*

Response: Assumptions about how budgets were created, used, and applied were made in the Supple-

mental Draft EIS and disclosed in the Appendix 16. Scientists and land managers have agreed that budgets (both current and future, as well as budgets to be developed) will recognize the integrated direction and priorities of ICBEMP. This emphasis will be consistent with current law, agency practice, and national priorities. Land managers will use existing agency administrative processes to make budget adjustments over time, they will then use the guidance and expertise of the implementation organization that is created after the Record of Decision.

Short-term vs. Long-term Risk

Comment: *While the document outlines appropriate long-term goals, it does not adequately address potential conflicts which may occur in the management of short- and long-term risks.*

Response: Both short-term and long-term risk management are goals of the Supplemental Draft EIS. The preferred alternative conserves the most intact ecosystems in the short term with the intent of expanding these healthy areas in the future. In other words, very little risk will be taken in high quality habitat areas, areas containing listed species, and other fragile areas. Restoration will occur in other areas where there is an opportunity to restore the vegetation composition, structure, and disturbance regimes. The short-term risks taken in these areas are necessary in order to reduce the threat of long-term risks to the ecological health of the area.

Comment: *We note that local land managers are to consider the acceptable levels of short-term and long-term risk from conducting management actions and from conducting no management actions. However, the Supplemental Draft EIS does not provide a framework for making these risk assessments. Absent clear direction, any decision will be subject to challenge and resulting gridlock.*

Postponing risk analysis to Subbasin Review and EAWS means that decision-makers will only be looking at part of the picture and therefore, unable to fully assess the risks.

Levels of acceptable risk to resources are inappropriately left to determination at the local level when the framework for this determination can and should be a key product of this regional planning effort.

Response: Risk assessment must be done at both the broad-scale and the fine-scale. The Supplemental

Draft EIS has identified and analyzed broad-scale risks and developed standards and objectives to mitigate those risks in the short-term such as Riparian Conservation Area direction, snag and coarse woody debris requirements, A1 subwatershed direction, old forest direction, terrestrial watershed direction, and road direction.

Other risks become apparent at different scales. These risks will be identified through the step-down process: Subbasin Review, EAWS, land use plan revision, and project-level analysis. In this way, the important risks can be assessed at each level for effective and efficient decision making.

Comment: *It is unclear why Objective A1-O2 does not include the concomitant requirement that low short-term risk be posed to long-term objectives by taking the approach as in the parallel objections for A2 subwatersheds.*

Response: The assumption is that A1 subwatersheds are more resilient to disturbance than A2 subwatersheds because A1 subwatersheds are closer to historical conditions. Therefore, there is a difference in assessing risk between the two types of subwatersheds.

Comment: *The direction is the Supplemental Draft EIS provides and appropriate balance between analysis and action. Assessing the short-term environmental risks of conducting restoration activities must be considered in light of the long-term risks of doing nothing. Some short-term risks must be avoided at the cost of long-term risks and visa versa. A consistent and accountable approach to addressing both short and long-term risks is needed.*

Response: The proposed decision works to meet the social and economic needs of people in the basin, while meeting ecological and restoration goals. The risk management strategy described in the fundamental architecture of the proposed decisions also strives to strike a balance between the short term risk and the long term risk, while remaining sensitive to the short term risk requirements of listed species.

Step-down Process

Analysis Levels, General

Comment: *There is an overemphasis on planning and analysis not enough emphasis on implementing projects.*

Response: The preferred alternative emphasizes minimizing short-term risk, especially to special

status species, important habitats and riparian areas. It places greater emphasis on conducting analyses prior to designing and approving management actions. It encourages use of the systematic, step-down approach for understanding current resource conditions, risks, and opportunities at various scales to better inform decision making relative to achieving desired outcomes.

Subbasin Review

Comment: *The protocols for Subbasin Review have not been finalized and have not undergone outside expert review. In order to ensure the credibility of this tool, we recommend that independent scientific validation of the proposed protocols be secured. In addition to peer review, some accountability for implementation of Subbasin Review findings must be included.*

Response: The protocol for Subbasin Review, *Ecosystem Review at the Subbasin Scale*, Volume 1, Version 1.0 (Subbasin Review Guide) was released in August 1999. It was developed by an interagency team and was based on the experience gained from several prototype Subbasin Reviews. Subbasin Review direction in the EIS was adjusted to address the need for peer review and increased accountability, calling for periodic agency reviews of a limited sampling of Subbasin Review reports. The Subbasin Review Guide and process are dynamic, recognizing that there could be adjustments as more experience is gained from its use.

Comment: *Standard B-S4(S2) requiring high restoration priority subbasins to be reviewed within two years is unrealistic. This standard needs more flexibility.*

Response: This standard has been changed to require the completion of Subbasin Review on high priority subbasins within three years.

Ecosystem Analysis at the Watershed Scale

Comment: *Depending on the schedule of completion of Ecosystem Analysis at the Watershed Scale (EAWS), the state may have to wait several years to obtain access across federal lands.*

Response: Criteria for conducting Ecosystem Analysis at the Watershed Scale (EAWS) are provided in Chapter 3 of the Final EIS, Standard B-S5. The length of time required to conduct an EAWS would depend on the nature and scope of the proposed

action and access needs. See also the Management Intent for EAWS in Chapter 3.

Comment: *The time allotments, necessary resources, and analytical expectations for Subbasin Review and Ecosystem Analysis at the Watershed Scale (EAWS) are too open-ended for dependable implementation. The amount of analysis required under EAWS or subbasin review is problematic because of declining staffs of both the managing agencies and the regulatory agencies.*

Response: It is expected that the Subbasin Review process will be a concentrated review of existing information that takes place in a relatively short period of time. The core team should spend no more than four to eight weeks. The five-step Subbasin Review and six-step Ecosystem Analysis at the Watershed Scale processes will assist in the prioritization of issues and needed activities reflecting a more efficient use of scarce resources. In addition, there will be focused reviews during the first years of implementation to determine if the objectives are being accomplished and at what cost. At that time, adjustments could be made.

Comment: *It is unclear how EAWS relates to "may affect" or "may adversely affect" determinations using the National Marine Fisheries Service and U.S. Fish and Wildlife Service matrices (Appendix 9).*

Response: Ecosystem Analysis at the Watershed Scale (EAWS) is not a decision-making process. It is intended to ensure that the location and design of activities are improved with the information generated through EAWS. Endangered Species Act (ESA) determinations of "may affect" or "may adversely affect" are determined later in the process. After an activity is located and designed using data from EAWS, the ESA determinations are developed. Use of EAWS should result in fewer projects receiving a "may adversely affect" determination.

Comment: *The EAWS process does not require that standards be developed on the basis of the needs of fish, wildlife, or plants. Instead, they apparently look at what they think the watershed is capable of producing. Accordingly, once they have decided the capability, then fish and wildlife habitat standards should be modified accordingly.*

Response: The six-step Ecosystem Analysis at the Watershed Scale characterizes the watershed, identifies issues and key questions based on that characterization, documents the current conditions in the

watershed and reference conditions based on changes relative to human influence and natural disturbance. That information is interpreted, and management recommendations are developed. These recommendations will be considered in land use plans where fish and wildlife standards can be modified.

Comment: *How and who makes the call on how much to negatively affect threatened, endangered or proposed species for the “good of the ecosystem?” Clarification is needed to prevent a lack of analysis of cumulative effects across administrative boundaries.*

Response: Broad-scale science findings and land use decisions will be applied to site-specific areas using a hierarchical approach that promotes understanding of current resource conditions. The mid-scale analysis (Subbasin Review) translates and transforms information from broad-scale into mid-scale information which can be used to provide context for finer-scale analysis. Subbasin Review is a collaborative, inter-agency process which is particularly useful for cumulative effects analysis required by NEPA. Land managers using information collected in this hierarchical, collaborative, ecosystem approach will be able to make better decisions using data at multiple scales irrespective of administrative boundaries.

Adaptive Management

Comment: *It is unclear how or when adaptive management will be implemented and how direction will remain consistent across the region.*

Response: Adaptive management is a continuing process of planning, implementation, monitoring, and evaluation to adjust management strategies across the basin. It will be applied as an iterative approach starting with monitoring to determine if planned activities have been implemented and standards and objectives followed. Effectiveness monitoring will detect basin-wide trends and the determination of the cause of these changes. This monitoring data will be used to evaluate and adjust management strategies to meet basin-wide goals and objectives. The EIS presents a framework for an implementation organization. That organization will assure that management direction and monitoring strategies are applied consistently across the basin.

Comment: *The loose description of adaptive management in a plan that presents no standards, no description of monitoring activities, no time-line, and no requirement*

that management be changed is not sufficient. The project doesn't promote or incorporate adaptive management as a viable concept and tool for avoiding management gridlock and managing risk within the context of compliance with federal laws.

Response: Monitoring and adaptive management are key features of both Alternatives S2 and S3. An implementation and adaptive management framework is presented in Appendix 10. Further direction on effectiveness monitoring and adaptive management are contained in standards and objectives in Chapter 3 relative to accelerated learning and management adjustment.

Monitoring

Comment: *Include a monitoring plan in the Final EIS.*

Response: The implementation monitoring plan can be found in Appendix 10 of the Final EIS. Within two years of the signing of the Record of Decision, an effectiveness monitoring plan will be completed

Comment: *Monitoring should cover all applicable water quality standards. In the Supplemental Draft EIS, monitoring of water quality standards is discretionary. Under this approach, how will land managers assert that applicable water quality standards are being met if not all of the standards are being monitored?*

Response: Alternatives S2 and S3 include standards that require the use of the Forest Service and BLM protocol to address waters listed under section 303(d) of the Clean Water Act. The protocol requires the land management agencies to validate current 303(d) lists, work with state agencies and local tribes to set priorities and time lines for addressing listed water bodies, and bring listed segments into compliance, among other requirements. Monitoring to address state-developed and EPA- approved water quality standards will occur at a finer scale than this EIS. Land managers will be required to monitor the effects of individual projects on water quality.

Comment: *There is a requirement for each administrative unit to contribute resources to implement a broad-scale monitoring plan that is not yet developed. Prior to signing the Record of Decision (ROD) the complete monitoring and evaluation program should be described and made available for public review and comment. The Final EIS and ROD should provide clarity and commit-*

ment to a monitoring strategy and an oversight implementation organization that would increase assurances that the broad scale needs, goals, and objectives are being addressed.

Response: An implementation organization framework has been added to Appendix 10. It will be amended to outline the appropriate organizational needs for oversight, science, data management, monitoring, and issue resolution. The intent is for the Record of Decision (ROD) to contain an implementation monitoring plan and requirement that the remaining monitoring strategies be developed jointly with Forest Service regional offices and BLM state offices collaboratively with intergovernmental partners within two years of the ROD being signed.

Comment: *The Final EIS should describe how the monitoring and evaluation described on pages 51 and 52 of Chapter 3 in the Supplemental Draft EIS is different than what is already required by the National Forest Management Act (NFMA) and Clean Water Act.*

Response: The ICBEMP monitoring strategies will be consistent with what is required in the NFMA, Clean Water Act, Federal Land Policy and Management Act (FLPMA), and other relevant laws.

Comment: *How will the issues identified during EAWS be monitored over time, and how will they be used as part of the adaptive management process to change management practices?*

Response: EAWS will identify issues and key questions which will be synthesized into management recommendations at the watershed scale. Monitoring activities will be developed that are responsive to the issues and key questions identified during EAWS. Monitoring results will then be evaluated to adjust management strategies if necessary to meet the objectives outlined in the EIS.

Comment: *Will there be sufficient resources to ensure that monitoring is conducted and effective?*

Response: Although the agencies do not control the amount of funding appropriated by Congress, it is expected by both BLM and Forest Service planning regulations that sufficient resources be available to conduct both implementation and effectiveness monitoring.

Scale and Decisions

Scale

Comment: *For some respondents:*

The plan is too restrictive and will leave little or no decision room for local land managers who know what is best for the forest. Local managers must conform their decisions to the new philosophy of protecting and restoring ecosystems without regard to local input or adverse effects on the local, or regional human population. The Supplemental Draft EIS, like the Draft EISs, elevates decision-making to regional and national levels.

While the Supplemental Draft EIS claims to give flexibility to local managers, it requires considerable finer-scale analysis to change from the default and risk-averse standards. Given budget and time constraints normally experienced by federal forest managers, default standards and passive management approaches will be used in the majority of cases.

For other respondents:

There is too much discretion left to local managers. More specific standards are needed.

Response: The variability of the interior Columbia River Basin requires that management direction provide some degree of flexibility to accommodate the diversity of the region. The management direction provides specific outcomes that are to be achieved across the landscape but gives managers the flexibility to develop the best methods for achieving outcomes. Managers will be guided through the process of achieving the broad-scale objectives by specific sideboards, including: Subbasin Review, EAWS and specific standards within the Supplemental Draft EIS that apply to sensitive areas such as riparian areas, old forests, and habitat for threatened and endangered species. The primary value of these analyses are to provide local managers with the type and level of information needed to ensure their site-specific decisions will be consistent with the land use plans as amended by the ROD. All projects initiated at the local level must also comply with the National Environmental Policy Act and the Endangered Species Act.

The hierarchical management direction and analyses, as described in Chapter 3, pages 39-52 of the Supplemental Draft EIS, are crucial when attempting to manage large, diverse landscapes such as those in the

project area. The results of mid- and fine-scale analyses provided by Subbasin Review and Ecosystem Analysis at the Watershed Scale (EAWS) are essential to achieving the Final EIS objectives. By proposing site-specific management actions, that are within the context of these analyses, local managers will have better opportunity to balance needs and be less likely to negatively impact threatened, endangered, or proposed species or species at risk.

Comment: *The logic for applying management directives, which vary in specificity among the various planning scales, is not clear. Subsequent decisions to be made at the subbasin, administrative unit, and watershed scales would be handicapped by the poorly defined concepts and data inconsistencies in the broad-scale plan. Until there is one plan that deals with all aspects of forest management, ICBEMP will have little effect.*

Response: The intent of the broad-scale management direction is to augment, and in some cases replace, specific direction in the land use plans that relate to the broad-scale compelling issues as defined in the proposed decision. However, some of the existing direction on a variety of topics, issues and allocations in current BLM and Forest Service land use plans will continue when the Record of Decision is signed. The purpose of step-down management direction is to provide context from broad-scale analysis and science findings to the site-specific areas using a methodical, hierarchical approach. Direction specific to Alternative S2 (see page 3-47 Supplement Draft EIS) addresses this issue.

Comment: *The XXX County Court has from the onset of this project expressed concern over the lack of a true partnership with the local communities. While we have been repeatedly assured such a partnership will exist in the management of the interior Columbia River Basin, we do not see a partnership relationship in the proposed action.*

Response: Local governments have an essential role, defined in law, which federal land managers will continue to build and establish. The topic of collaboration builds on the responsibilities federal land managers have to “states, tribes and local governments”. One method to address the needs of communities and establish partnerships is the high restoration priority strategy. One criteria in this strategy identified subbasins with economically dependent communities that may benefit from nearby restoration activities.

The socio-economic and tribal component of Alternative S2, described on pages 3-86 through 3-92 of the Supplemental Draft EIS, specifically addresses the needs of counties.

Comment: *We have seen a number of situations where individuals or groups rely on the coarse resolution modeling results presented in the Supplemental Draft EIS to contest local information derived from site specific data. A greater effort is required to convey to the public that the modeled results are not a substitute for local information.*

Response: A step-down process for applying ICBEMP broad-scale science findings and management direction to site-specific activities on national forest and BLM-administered lands is outlined in the Supplemental Draft EIS. This process is intended to provide the linkages between broad-scale information and fine-scale data to provide the context for designing and/or modifying site-specific management activities.

Comment: *Monitoring is essential to the outcome-based approach for developing standards for project design. Because projects are designed at the site-scale, not the basin-scale, monitoring information must be available at the site-scale, and basin-scale information alone will not be adequate. We are concerned that the monitoring approach now being pursued focuses only at the basin-scale, and will not assure adequate information will be available for step down analyses and planning processes to design standards and projects through adaptive management.*

We see some serious flaws in the data, and the monitoring and adaptive management strategy as these areas relate to ecological scale, because the strategy is broad-scaled or at a “coarse-filter” level of ecological assessment.

Response: Monitoring is required to determine if the management direction is being implemented correctly and adequately. Subsequent finer-scale monitoring could evaluate if the results of site-specific management activities are effective in producing the predicted outcomes. Monitoring and evaluation are discussed in Chapter 3, pages 51-52 of the Supplemental Draft EIS. Further explanations on the strategies of monitoring are included in Appendix 10 of the Final EIS.

The proposed approach for assisting in the design of site-specific projects involves the application of

context-setting step-down analyses and watershed condition indicators (WCIs), B-S43, page 3-77 of the Supplemental Draft EIS. Fine-scale data from monitoring site-specific projects will be aggregated to provide status and trend of the WCIs. Collectively, the intent is for the aggregation of fine-scale project level monitoring, WCIs, and effectiveness monitoring components to be used in developing feedback for adaptive management.

Comment: *Standard B-S2 (Supplemental Draft EIS, page 3-46) requiring collaboration with the National Marine Fisheries Service, the U.S. Fish and Wildlife Service, and Environmental Protection Agency in conducting Subbasin Reviews should be broadened to include state fish and wildlife agencies and private organizations that may have relevant information.*

Response: The referenced standard applies primarily to the Federal Agency Endangered Species Act Consultation process. For that particular standard, the federal partners are the appropriate agencies to be involved. Other standards, such as conducting Subbasin Reviews and EAWS, apply to state agencies, private organizations, and tribes.

Comment: *A more clear and direct explanation is needed to communicate that the plan is the top-level of a multiple-level series of assessments and that site-specific projects are not intended to be an outcome. Otherwise, the result will be to adopt a programmatic-level philosophy of land management based on ecosystem management and will cloud expectations for on-the-ground operations. For example the step- down approach, which would link the multiple scales of analysis required for a hierarchical ecosystem management approach, is well defined. There are no rule sets to follow when scale or multiple scale specific resource questions should be addressed. Difficulties arise when you try to apply the philosophy to actual project work.*

Response: The Scientific Assessment identified that various types of ecosystem risks (degraded habitats, noxious weeds, risk of fire are examples) are best managed at the broad- and mid-scale. Thus, the direction in the Final EIS provides a broad context in which fine-scale risk (decisions made at the local level) can support the risk mA more clear and direct explanation is needed to communicate that the plan is the top-level of a multiple-level series of assessments and that site-specific projects are not intended to be an outcome. Otherwise, the result will be to adopt a programmatic-level philosophy of land

management based on ecosystem management and will cloud expectations for on-the-ground operations. For example the step- down approach, which would link the multiple scales of analysis required for a hierarchical ecosystem management approach, is well defined. There are no rule sets to follow when scale or multiple scale specific resource questions should be addressed. Difficulties arise when you try to apply the philosophy to actual project work management strategy at the broad-scale, which promotes a consistent and coordinated approach for ecosystem risk management at the base-level. The step-down process is one tool intended to facilitate this type of risk management. Other risk management strategies include base-level direction intended to restore and maintain ecosystem conditions, and restoration direction for high restoration priority subbasins.

The mid-scale analyses provided by Subbasin Reviews and ecosystem analysis at the watershed scale are essential to achieving the Final EIS objectives in specific situations. These processes aren't the only place, however, where information can be added about risk and opportunities. Proposing site-specific actions within the context of these analyses will provide managers better information for opportunities to balance needs.

Comment: *If portions of Wyoming, Nevada, and Utah drain into the interior Columbia River Basin, why aren't they part of the basin-wide salmon issue? If Utah national forests can replace INFISH standards with a forest plan revision and Nevada national forests can replace INFISH standards with a forest plan amendment process, why can't the other Forest Service and BLM districts do the same? We also have problems with the overlap with the Northwest Forest Plan. To exempt this area because of possible confusion with how Spotted Owl decisions might be affected is highly questionable.*

Response: The Scientific Assessment identified ecosystem status, risk and opportunity for all the federal lands within the interior of the Columbia River Basin, as well as portions of the Great Basin in Oregon, and portions of the Klamath River Basin in Oregon. Lands outside of the drainage of the Columbia River in Idaho and Montana were excluded. The Secretary of the Interior and the Secretary of Agriculture in a letter to the Congress (October 8, 1998) identified that the project scope should be narrowed to address only the broad scale, compelling issues, in the project area that must be resolved at the basin level. Consistent with this approach, the regional

executives decided to limit the management direction in the Final EIS to only the project area in Idaho, Montana, Oregon and Washington, although the science will continue to be used by the administrative units in Utah, Wyoming, and Nevada, as appropriate.

In addition, since an approved strategy for the Northwest Forest Plan area is already in place and being implemented, the executives agreed not to duplicate or replace the direction of the Northwest Forest Plan that already applies to portions of the project area east of the Cascade crest in Oregon and Washington.

Comment: *The description of conditions and trends is at a different scale than the application of the ecosystem management proposed in the alternatives. Inclusion of private lands in the conditions and trends evaluation does not give an accurate depiction of the conditions and trends on the actual lands where the direction would be implemented. Environmental change that occurred through urban development and intensive agricultural development will not change as a result of the alternatives. It is not possible for the public to understand or recognize the true need for or implications of the proposed action because the conditions and trends are based on a general area and not on the affected Federal lands. The conditions and trends that are implicated in the purpose and need must relate only to the Federal lands where the alternatives would apply.*

Response: The Scientific Assessment data looked at all lands within the interior Columbia River Basin regardless of ownership to assess condition and trend. It was necessary to compile continuous consistent data layers for key landscape components that influence ecosystem processes and functions, such as road density and vegetation. However, the direction in the proposed decision applies only to the BLM- and Forest Service-administered lands in the project area.

The information for conditions and trends in Chapter 2 of the Supplemental Draft EIS, which is based on the Scientific Assessment, focuses on those portions of the environment that the management direction (Chapter 3) addresses and that are administered by the BLM or the Forest Service within the project area.

Comment: *In Appendix 4 of the Supplemental Draft EIS (Response to Comments), it is stated that the EIS Team was not able to use "fine-scale" information. Applying ICBEMP's definition of fine-, mid- and broad-scale from the glossary, some studies would fall within*

ICBEMP's definition of fine-scale. However, Ecological Site Inventory (ESI) and other data collected at the same time would be considered mid-scale data according to the definition. On page 12 of this chapter, it is stated that a statistical sample size (of mid scale) was used to map vegetation types, so the question remains, why was BLM ESI data not used to map the basic vegetation types?

Response: The purpose of the science data was to provide information about the condition of the ecosystem at the broad scale. This required the Science Team to compile continuous consistent data layers for key components such as road density and vegetation. The BLM ESI data is available only in certain areas, in GIS format, and is neither consistent between administrative units nor continuous. The other databases will be useful when making decisions at the mid- and fine- scales, but they were not able to be used to provide broad-scale context.

Comment: *We are in full agreement with federal land management issues being discussed openly with local communities and other partners. However, it is critical that collaboration does not give veto power to a stakeholder. Subbasin Review (SBR) and EAWS must be permitted to go forward without attendance or agreement by each collaborating stakeholder.*

Response: An important element of the step-down management direction contained in the Final EIS is to conduct mid- and fine-scale analyses in a collaborative environment. It is important to note that step-down in itself is not a decision-making process, but it does provide information and context to make well-informed decisions. Collaboration can promote awareness and understanding of agency-specific issues. However, if all collaborating partners cannot agree, the Final EIS management direction permits land management agencies to continue with the step-down process per direction in chapter 3, page 47 of the Supplemental Draft EIS.

Comment: *The economic analysis in the Supplemental Draft EIS considers economic factors only on a macro-economic scale region-wide, and does not consider the true impacts on local communities or local businesses.*

Response: The analysis of the social and economic conditions of communities, counties, and economic regions is disclosed and discussed in the Scientific Assessment, the [Social and Economic Condition of Communities] report (February 1998) and the Report to Congress (April 2000). Given the resolution of

the data, the method of collection, and the assumptions, these data are not useful to predict social and economic impacts to individual communities. The information was useful in determining trends and impacts at the basin scale and at the scale of RAC/PACs.

Comment: *National Environmental Policy Act (NEPA) requires that information must be of high quality. NEPA also requires expert agency comments. The Supplemental Draft EIS does not meet these NEPA requirements regarding the issues relating to the requirements of the Wild and Scenic Rivers Act. The Supplemental Draft EIS did not discuss why previous forest plans ignored the requirements of the Act to either perform eligibility studies on creeks and streams that may have outstandingly remarkable fisheries values or protect those creeks and streams from damage until eligibility studies were undertaken.*

Response: The information presented in the Supplemental Draft EIS represents the best science available. Evaluation of eligibility under the wild and scenic Rivers Act is a responsibility of land use planning at the National Forest and BLM district level. It is outside the scope of the ICBEMP to evaluate the eligibility of a specific portion of a river as that requires fine-scale data and was not identified in the project's purpose and need.

Comment: *The preferred alternative does not provide needed guidance on the planning and implementation of connectivity and broad-scale linkages. Although direction is included for the development of broad-scale connectivity/linkages of wide-ranging carnivore habitat, there is little guidance as to how this will be carried out. Greater detail is needed if this directive, an important management goal, is to be made a reality.*

Response: An example of an ongoing effort to address broad-scale linkages was added to the proposed decision in the Final EIS to indicate a way of accomplishing the desired outcome.

Comment: *During the period of development of the EIS, Forests throughout the project area have revised the boundaries of 5th-field (watershed) and 6th-field (subwatershed) Hydrologic Unit Codes (HUC) to comply with national protocols for watershed delineation. While 4th field HUCs remain unchanged from those identified within the ICBEMP document, changes in watershed and subwatershed boundaries require "crosswalking" the ICBEMP watersheds and/or*

subwatersheds to the newly revised national watersheds and subwatersheds before ICBEMP spatial data can be used in assessment documents. The cross-walk process, besides being time consuming, can also result in some erroneous determinations in cases where new national watershed and subwatershed boundaries depart significantly from corresponding ICBEMP boundaries.

Response: The final delineations for watersheds and other land allocations such as Riparian Conservation Areas (RCAs) and Terrestrial T Watersheds will be made by local land managers using results from mid- and fine-scale analyses, data, and knowledge.

All projects must work within the limitations of data and assumptions. Any errors that may be found in the information and the boundaries of watersheds/subwatersheds as these boundaries are applied on the land, are expected to be within the normal acceptable bounds of a project such as this, and are not anticipated to affect the accuracy of the estimation of effects in the Final EIS.

Comment: *The broad-scale and fine-scale do not connect, and cannot be connected through the proposed follow-up analyses. The project is inconsistent in addressing the scale of the decisions to be made (e.g., chapter 1, Page 16). On the one hand, the Supplemental Draft EIS states that, "the broad-scale nature of this EIS does not include site-specific decisions." Yet the Scientific Assessment and Chapter 2 of the Supplemental Draft EIS (Affected Environment) crosses back and forth from broad-scale to fine-scales such as descriptions of riparian areas.*

To repair these problems, follow the maxim that broad-scale analysis should lead to broad-scale guidance to managers. The Supplemental Draft EIS should amend regional guides only, and not amend individual forest plans. Otherwise, the Supplemental Draft EIS attempts to do too much with not enough information and becomes a regional plan instead of a regional guide as required by the National Forest Management Act (NFMA) regulations.

Response: The regional-level landscape analysis and scientific documents that are the scientific bases for the Final EIS support an outcome-based approach that provides basin-wide direction but allows local managers to determine necessary prescriptions and site-specific activities based on local conditions. The scientific underpinnings of this conclusion include the multiple risks, variations, and linkages that are necessary in a project area this diverse and complex.

The logic and reasoning behind these “connections” can be found in Figure 3.1 of the Supplemental Draft EIS, titled “Implementation of ICBEMP Tiered Analysis System”.

The intent of the Final EIS broad-scale management direction is to augment, and in some cases replace, direction in regional guides (which apply to Forest Service only) and land use plans. Direction is focused on those compelling broad-scale issues that make a difference on ecosystem conditions at the broad-scale. This topic is described in Chapter 1 section titled What the Decision will Provide and What the Decision will not Provide. For the most part, fine-scale decisions will be deferred to individual administrative units after appropriate site-specific NEPA analysis. Those decisions must be made within the context of the broad-scale direction in the Final EIS

Comment: *There is little discussion about the potential differences that will develop among ownerships in the way vegetation is treated. In many cases federal forest lands are surrounded by quite different management strategies, which seems to exacerbate the number of situations associated with endangered species. Analysis of other ownerships was not done.*

Response: Ongoing and foreseeable activities on adjacent non-federal lands, including management applications and potential effects, were considered as part of the cumulative effects analysis conducted by the Science Advisory Group.

Comment: *The area included is too large and diverse to be lumped into one plan. The standards are too restrictive and result in a “one-size-fits-all” management scheme. This type of management structure is inconsistent with the dynamic nature of ecosystem management and eliminates any opportunity to apply adaptive management.*

None of the Supplemental Draft EIS alternatives provide management direction to replace one-size-fits-all interim direction (PACFISH, INFISH, Eastside Screens) with functionally driven, performance-based direction. Many of the interim standards are in fact not broad-scale direction, but fine-scale direction. A successful ecosystem management strategy, as envisioned in the Project Charter, would replace interim protection strategies not only in form, but in management philosophy, approach, and scale.

Analysis at a broad level often masks the changes that occur at smaller scales. The ICBEMP document constantly states “those differences will become more apparent at the fine scales.” If those changes are only apparent at the fine scale however, they will be missed at the broad-scale level. Those fine scale differences could significantly affect the environmental effects predicted by Supplemental Draft EIS. We believe ICBEMP direction should not be imposed as a top-down set of requirements. Instead they may be offered as one alternative in a set of alternatives, all of which show the effects at the local and regional level.

Response: The interim strategies (PACFISH, INFISH, Eastside Screens) were intended to be short term and risk averse. The ICBEMP strategy is a long-term approach that does incorporate some direction from the interim strategies into the hierarchical management direction to conserve and restore aquatic, riparian, and terrestrial resources.

The direction in the Final EIS provides a broad context in which fine-scale decisions made at the local level are able to support the needs of large-scale issues that could be affected by local actions. This strategy promotes a consistent and coordinated approach for the local decisions by establishing parameters based on scientific information. The step-down process is one tool intended to ease the implementation of the Final EIS management direction.

The strategies in the proposed decision are intended, to the extent possible, to avoid arbitrary application of standards across the basin, which science has indicated may lead to the wrong outcomes. Instead, direction is built on the principle that the project area’s varied landscape has a multitude of conditions and capabilities. Any landscape strategy dictating a one-size-fits-all prescription will not take advantage of this reality. A strategy, such as the interior Columbia River Basin Ecosystem Management Project, that recognizes and takes advantage of the variability across the landscape will be more successful.

Decision-making

Comment: *The Supplemental Draft EIS is an improvement over the Draft EISs but fails to provide adequate guidance to decision makers. The fine-scale data needs of local managers may not be consistent with the Supplemental Draft EIS.*

Response: The proposed decision applies geographically specific direction, restoration direction, base-level direction, and process direction across the basin. This new direction directly amends or augments current direction in existing land use plans. Existing land use plan elements not affected by this new direction remain in effect. The process direction, particularly step-down, provides for ecosystem assessments at the fine scale to match broad-scale direction to appropriate landscapes and to provide the necessary support for informed decision making at each scale.

Comment: *ICBEMP should be terminated without a Record of Decision. Management should continue under existing land use plans.*

Response: The agencies have determined that the ICBEMP is the most effective way to replace interim direction for threatened and endangered species across the basin and to address issues that cross administrative units.

Comment: *At this enormous regional level, only a guidance document can work. Further work on this project should focus on providing local managers with guidance and information only.*

Response: The Scientific Assessment shows that a combination of scale-appropriate direction (with limited geographically specific direction and more extensive restoration and base-level direction) and process guidance most effectively addresses the broad-scale issues and identified purpose and need for this project.

Comment: *ICBEMP should be terminated without a Record of Decision. Management should continue under existing land use plans.*

Response: The agencies have determined that the ICBEMP is the most effective way to replace interim direction for threatened and endangered species across the project area and to address issues that cross administrative units.

Comment: *Site-specific management decisions should be made by local decision makers, local citizenry and parties directly and personally affected by resource management decisions. The Supplemental Draft EIS does not support this approach.*

Response: The Local, Regional, and National Uses discussion in Chapter 2 of the Supplemental Draft EIS identifies changes in public land use that indicate a shift from lands being primarily local and regional assets to being regional and national assets. "While these lands have always been national assets by definition, the actual use and way the lands are valued increasingly reflect this." The objectives and standards in the action alternatives provide appropriate regional direction, designed within the context of the Scientific Assessment and national policies, while providing for local decisions informed by regional context and finer-scale, collaborative ecosystem assessments.

Comment: *There is too much agency discretion at the local level.*

Response: The integrated management strategies embodied in geographically specific, restoration, and base-level direction, in addition to the portions of the existing land use plans not amended by this new direction, establish goals and parameters within which local decision-making must be made. The step-down process adds mid- and finer-scale ecosystem assessments to match broad-scale direction to applicable landscape types and conditions and to further inform local decision-making.

Comment: *There is not enough flexibility and too much analysis required of local managers. The plan needs to have broad objectives and allow local managers to have the latitude to meet them. Alternatives S2/S3 establish 112 objectives, standards, and guidelines, plus additional pages of management direction, management intent, and rationale statements that are also mandatory direction. This amount of direction is contrary to your statements that ICBEMP is not site-specific and/or making fine-scale decisions.*

Response: The step-down process adds a systematic approach for understanding current resource conditions, risks, and opportunities, by adding ecosystem assessments to the existing decision-making hierarchy in the Forest Service and BLM. This information is necessary to ensure that site-specific decisions implement broad-scale, outcome-based direction (responding to the broad-scale cumulative effects that individual plans could not adequately address) while giving managers the discretion necessary to select actions that fit the

on-the-ground conditions. The integrated strategy, expressed through resource objectives and their associated standards and guidelines, reflects the breadth of issues, risks and opportunities across the basin. Focusing on outcomes versus specific restrictions on actions and on context-setting and prioritization processes to inform finer-scale decisions does not constitute site-specific direction.

Comment: *The EIS has a heightened legal requirement to expand its range of alternatives and broaden its analysis of effects. The EIS has a difficult practical problem of gathering forest resource data and developing models to evaluate the data.*

Response: The Draft EISs analyzed seven alternative management strategies, and the Supplemental Draft EIS analyzed three additional alternatives. These alternatives provide a reasonable range of approaches to meeting the identified purpose and need for the project and a basis for comparing environmental consequences. The comprehensive Scientific Assessment and related science products, as well as the many data sources across the basin, provide an extensive foundation from which to base broad-scale findings, alternative management approaches, and analysis of their effects.

Comment: *The project does not provide a well-defined forest amendment/revision process.*

Response: Chapter 1 of the Supplemental Draft EIS states that the Record of Decision (ROD) will automatically amend 62 Forest Service and BLM land use plans. Management direction from the ROD, which becomes part of the amended plans, will guide activity-level decision-making until replaced through subsequent amendment or revision. Management direction in current land use plans that is not directly superseded by the ROD will remain in effect. The process of aligning existing planning documents with the new direction will be accomplished by Forest Service and BLM offices after the ROD is signed. A strategy will be provided in the ROD to assure there is no gap in resource protection and management during the transition phase.

Comment: *The current proposal is incomplete because there are major uncertainties about both targeted outcomes and the path to get there. The proposal does not ensure a smooth transition from current direction.*

Language should be included to describe how existing land use plans will be amended and what the transition process will be between the signing of the Record of Decision and full implementation of the management direction.

Response: Transition is an important issue and will be closely monitored in the implementation process. A strategy will be provided in the Record of Decision to assure there is no gap in resource protection and management during the transition phase. Language describing how existing land use plans will be amended, accounting for transition from exiting plan to amended plan, will be included in the Record of Decision.

Comment: *Removing the Northwest Forest Plan area from the ICBEMP decision will result in fragmented management direction for the affected subbasins and Resource Advisory Council/Provincial Advisory Council areas. The ICBEMP decision should supercede decisions of the Northwest Forest Plan that pertain to these lands. These eastside areas were not rigorously or adequately addressed by FEMAT, and are more closely affiliated with the ecology of areas covered under the ICBEMP Scientific Assessment.*

Response: The Northwest Forest Plan is an on-going plan which adequately addresses the management of national forest lands it covers east of the Cascade crest. The science assumptions about management prescriptions that may occur in areas of overlap were reviewed, but no changes to the ICBEMP alternatives were considered necessary. The Interior Columbia River Basin science will be evaluated and considered when the Northwest Forest Plan is revised.

Comment: *Will there be an ICBEMP steering committee to implement the decision, or an equivalent Regional Ecosystem Office for ICBEMP?*

Response: The current Executive Steering Committee for the project will continue to oversee the implementation of the Record of Decision and an interagency implementation organization will be established. However, it will be much smaller in scope than the Northwest Forest Plan, Regional Ecosystem Office. A description of the implementation organization is provided in Appendix 10.

Use of Science

Comment: *The Supplemental Draft EIS should clearly identify the process for incorporating the science from the ICBEMP into existing land use plans and present a comprehensive risk management strategy.*

Response: Implementation of the Final EIS direction will lead to incorporation of the science into land use plans. A process to amend current land use plans and incorporate the management direction is discussed in Appendix 10 and will be addressed in the Record of Decision (ROD). A comprehensive risk management strategy is integrated into the management direction.

Comment: *The Supplemental Draft EIS should consider the Scientific Societies Panel's recommendation to protect roadless areas that are 1,000 acres in size or larger from logging and road building.*

Response: The Scientific Societies Panel's recommendations were completed after the Scientific Assessment was completed. The Scientific Societies Panel used some of the Scientific Assessment information, most notably the ecological value of roadless lands. The size of "roadless" areas is a political and social decision, more than a science-based decision. The Scientific Assessment has noted the value of unroaded areas, and how these areas can contribute to species conservation, particularly Wisdom et al. (2000) who note the value of unroaded lands to several terrestrial carnivores.

Comment: *Some respondents feel that ICBEMP science information should be used to reduce risk and create prescriptive implementation standards based on existing PACFISH, INFISH, and Eastside Screens. Others want the science used only as a tool for informing decision-makers because there are too many uncertainties and too few practical applications.*

Response: The Scientific Assessment was used in the development of outcome-based direction appropriate to the basin-wide scale. At the basin scale, prescriptive standards would have to be extremely conservative to address conditions that may exist in only limited areas of the basin. Such standards can create unintended adverse effects by limiting needed restoration activities. However, a need for basin-wide outcome-based direction to address identified issues has been indicated in the Scientific Assessment. The scientific information generated by the ICBEMP will

also continue to be available to decision makers to help inform future decisions.

Comment: *The Supplemental Draft EIS lacks expert agency comments and accurate scientific analysis, as required by NEPA, to explain each of the reasons why state best management practices (BMPs) have not prevented damage to watersheds, fisheries and fisheries habitat on the national forests within the ICBEMP project area.*

Response: Changes in watersheds, fisheries, and fisheries habitat—some of which can be characterized as damage—have been occurring in the interior Columbia River Basin since the mid 19th century. Most of the state BMPs have been in effect for little more than a decade. There are no data recent enough to conduct a quantitative analysis of the effects of the BMPs. BMPs will remain in effect under the proposed decision

Comment: *Please explain: (1) how habitat connectivity measures were used for the environmental index model, (2) how the probabilities for the outcomes were developed, and (3) discuss the statistical reliability of using a weight-averaged percentage of the historical weight-average for reporting the model outputs.*

Response: (1) Habitat connectivity is a measure of the degree to which patches of habitat fall within the dispersal capability of each species. Habitat connectivity was not used in the environmental index model, which assesses habitat conditions at the individual subwatershed or watershed scale. Connectivity was, however, one of three input variables in the population outcome model, which yields a basin-wide model outcome. Connectivity was measured using an algorithm developed specifically for the outcome model. Any subwatershed/watershed with a non-zero value from the environmental index model was mapped and a buffering routine used to join all subwatersheds within the natal dispersal distance of the species.

(2) Probabilities for the population outcome model were developed by the Terrestrial Science Advisory Group, using their expert judgement and general knowledge of example species' population status in the basin. The structure of the population outcome model is based on conservation biology and population biology principles. The structure and conditional probabilities of the population outcome model were peer-reviewed and the approach was supported by these reviews.

3) No model outputs were reported as values relative to historical; however, 2 of 3 model inputs (habitat capacity and range extent) in the population outcome model were entered as a percentage relative to historical. The use of historical values as a reference point was based on the general premise that the intent of management is to manage toward or within the range of historical variability, and that the models portray relative, not absolute, quality of conditions among alternatives and time points. Weighted averages are commonly used in statistical analyses, and generally have good statistical properties, especially when the weights (in this case, subwatershed area) reflect the precision of the estimates.

Comment: *The outcomes developed for the environmental index and population outcome models are not appropriate for habitats in the interior Columbia River Basin.*

Response: At this time no data or analysis techniques are available to reliably conduct a formal population viability analysis for each species at the scale of the interior Columbia River Basin. The environmental index and population outcome models reflect the terrestrial scientists' best understanding of how the system operates at the broad scale and the interactions among system components. Both empirical data and professional judgment were used to build the models. These models were peer-reviewed by habitat and population ecologists, and the reviews support the modeling approach and results. Population outcomes are not a direct measure of population viability but portray a measure of the amount and distribution of suitable environments for individual species across the basin, combined with potential effects of other factors that can affect populations, such as small population size, interspecific competition, and disease. The models are working hypotheses that have not yet been validated through monitoring and research. Scientists are now conducting analyses to validate model predictions for the current time period, and the results will be submitted to peer-reviewed journals for publication.

Comment: *The Supplemental Draft EIS should update its science models by using the classification system developed by the Fire Lab in Missoula, Montana.*

Response: Information used in the Supplemental Draft EIS relative to vegetation and fire regimes was developed at the Forest Service Fire Lab in Missoula. Recent development of nation-wide data by the Fire Lab on vegetation, fire regimes, and fire regime

condition class was not used in the Final EIS because it has just become available. This nation-wide data also have lower resolution and confidence than the information developed by the Fire Lab specifically for the project. The nation-wide data on fire regime condition class are similar in definition to ICBEMP definitions of historical range of variability departure, although the ICBEMP has higher confidence because of refined mapping for the ICBEMP Final EIS.

Comment: *The cost factor(s) and projected outcomes used to model the effects of Alternative S3 are not reasonable and result in an inaccurate effects analysis. The cost factor assumes too few acres would be treated, and the models over-weight the uncertainty factor for this alternative.*

Response: The cost factor was assumed to be 25 percent higher in Alternative S3 than Alternative S2 because of less emphasis on step-down analysis and planning in Alternative S3. Less emphasis on this type of planning would tend to result in smaller size contiguous treatment areas, lack of concentrated restoration, and lack of agreement on the desired landscape mosaic. The primary factors found to be significant in reducing per-acre costs of treatments were: (1) increasing contiguous restoration project area; (2) concentration of restoration activities in a large contiguous landscape for multiple years until the desired mosaic was achieved; and (3) an integrated desired landscape mosaic condition established through step-down planning that involved basin and subbasin context for prioritization and watershed analysis to achieve landscape mosaic objectives. There were no differences in the models relative to uncertainty between Alternatives S1, S2, and S3.

Comment: *The Supplemental Draft EIS did not incorporate and cite several peer-reviewed scientific papers provided to the EIS Team by the Oregon Natural Desert Association and did not use pertinent studies from the University of Idaho.*

Response: The Science Advisory Group used the latest science information available in evaluating the effects of the alternatives. Not all information used by the Science Advisory Group is specifically cited in the Supplemental Draft EIS. For example, the Science Advisory Group effects analysis papers are cited in the Supplemental Draft EIS, but not all the information used by the Science Advisory Group in developing the models or analysis are cited. The *Scientific Assessment* cites the many other studies and

papers that were used in developing the scientific publications.

Comment: *The scientific data used by the Supplemental Draft EIS are neither complete nor specific enough to be used for amending land use plans. The uncertainty of the analyses should be more fully disclosed. In addition, the Supplemental Draft EIS inappropriately used aerial surveys and satellite data, surrogates, opinions, and assumptions to develop finer scale management strategies.*

Response: The broad-scale science data cover the entire project area with information on a variety of topics including, but not limited to: vegetation types, fire regimes, terrestrial species of concern, aquatic species of concern, and social and economic conditions. These science data were assessed for accuracy using finer-scale data and determined to be sufficient to describe the historical and current conditions for the project area to predict effects for the Supplemental Draft EIS at the scales of the basin and subbasin, and to determine the dominant characteristics of watersheds and subwatersheds. These were the scales addressed by the Supplemental Draft EIS to amend land use plans. These data were not used for finer-scale watershed analysis or project planning.

The broad-scale data not intended to be sufficient to amend the fine-scale details of local land use plans, watershed analysis, or project planning. Subbasin Review and other step-down processes were designed to provide that level of resolution.

The use of satellite imagery, aerial photograph interpretation, expert opinion, and surrogates are a normal part of all scales of landscape analyses. Those methods have undergone science peer review and scrutiny by experts outside of the project.

Comment: *Previous scientific assessments have called for rapid, aggressive action and the use of commercial harvesting techniques to address forest health concerns. Unless these actions are specifically identified as a part of the restoration strategy, the Supplemental Draft EIS will not adequately address forest ecosystem health hazards and risk.*

Response: Timber management (including commercial harvest, commercial thinning, pre-commercial thinning, salvage, stewardship harvest and thinning for forest restoration, prescribed fire, planting, and other management activities) were included in the models used to project short-term (10-year) and long-

term (100-year) effects of the EIS alternatives. Projections indicate substantial increases in commercial harvest, stewardship harvest, thinning, and other forest management activities in the short term. The level of commercial harvest depends on local product and market conditions. Projected management activities were driven by the objectives and goals in the Supplemental Draft EIS rather than by specific commercial timber harvest amounts or locations.

Comment: *The Supplemental Draft EIS uses road density as a surrogate for ecological integrity, and the past effects of roads to estimate likely future effects. In addition, road density data from a three percent sub-sample was extrapolated to all subbasins. This is an incorrect use of data and biases the analysis by overestimating the impacts of road construction and timber harvest.*

Response: Road density was only one of a group of variables used to assess ecological integrity. The aquatic, terrestrial, and landscape assessments all found high correlation of increasing road density with declines in native species diversity, ecological processes, and landscape composition and structure. These assessments and the models used to predict Supplemental Draft EIS effects recognized that current and future road construction techniques will mitigate many of these negative effects, and that increased maintenance of existing roads will reduce negative effects. However, it was also recognized that roads are not a native habitat and that some negative effects will occur irrespective of mitigation. The three percent sub-sample of road density was used in independent correlation and accuracy testing of the road density model. The variables used in the road density model were a group of broad-scale variables (such as terrain, life form, and ownership) that were available continuously across the basin.

Comment: *The conclusions presented in the Summary of Conditions and Trends for Aquatic and Riparian Habitats are not supported by the information presented in Chapter 2. No logic trail is provided to lead the reader from the data collected in the Scientific Assessment to the broad conclusions presented in the Supplemental Draft EIS.*

Response: The summary of conditions and trends for aquatic and riparian habitats in Chapter 4 of the Supplemental Draft EIS corresponds with the more detailed discussion of aquatic and riparian habitats in Chapter 2. That discussion refers to information from the Aquatics Chapter (Lee et al. 1997) of the

Assessment of Ecosystem Components, related subsequent publications based on the *Scientific Assessment*, and other citations referred to in the *Scientific Assessment*.

Comment: *The Supplemental Draft EIS fails to analyze the cumulative effects of implementing the proposed alternative in combination with other broad-scale federal land management decisions such as the Northwest Forest Plan, the Sierra Nevada Ecosystem Project, and the Roadless Areas Initiative.*

Response: The analysis of the Supplemental Draft EIS alternatives by the Science Advisory Group accounted for cumulative effects across the entire project area. This included portions of the Northwest Forest Plan area, the northern end of the east-side of the California Cascades, the greater Yellowstone ecosystem, private lands, other ownerships and locations not included in the decision area. These effects are discussed for each landscape, terrestrial, aquatic, and socio-economic topic in the Science Advisory Group's Supplemental Draft EIS effects evaluation.

The interactions of the alternatives with the Forest Service's initiative on roadless areas were examined. Since the Supplemental Draft EIS direction does not propose significant increases in road building on Forest Service- or BLM-administered lands and allows only "rare" road-building in unroaded areas, the effects of the alternatives on the roadless area initiative were judged to be minimal.

Comment: *The classification system used to characterize rangelands does not accurately portray current conditions. In addition, the broad range in the moderate and high impact categories versus the narrow range (0-5 percent) for the low category is inappropriate, as is the use of historical conditions as a benchmark. The use of broad ranges in the lower condition classes make it impossible to detect improving trends until they become very large in magnitude. This system biases the analysis against livestock grazing.*

Response: The rangeland classification system was developed with the oversight of external experts (see administrative record information on rangeland vegetation expert panels) and has been subjected to scientific peer review. Class breaks reflect an unbiased assignment in proportion to area. That is, class breaks were designed to include equal area in each class. The Science Advisory Group recognized that this made trends more difficult to recognize and

developed trend components for the major landscape characteristics (see Quigley and et al. 2000, and the Science Advisory Group administrative record).

Comment: *No comprehensive independent scientific review has been conducted to validate the conclusions in the Supplemental Draft EIS.*

Response: From the project's inception, independent scientific peer review of the products produced by the Science Integration Team and later the Science Advisory Group has occurred. All of the procedures, data, conclusions, and recommendations developed by the science teams used in the Supplemental Draft EIS have undergone scientific peer review in the form of more than 50 scientific articles and publications produced by the scientists. Results from the science teams have been or are being published in both national and international scientific journals. This sound foundation of scientific information will be the basis for making reasoned decisions about the management of the natural resources in the interior Columbia River Basin.

The science consistency evaluations conducted by the Science Advisory Group throughout the development of the Supplemental Draft EIS, ensured that peer reviewed procedures, data, recommendations, and conclusions were communicated accurately to the decision makers.

The project has included the most science rigor of any land management plan ever attempted by either the Forest Service or BLM. The assessment, evaluation of effects, and science consistency evaluations made by the scientists involved with the project and the independent peer review of their science documents, ensures that the Supplemental Draft EIS and the decisions made are based on the best scientific information available.

Comment: *The rangeland condition classifications in the Supplemental Draft EIS are different from the BLM's rangeland ecological site inventory and trend data. Please explain why a subjective technique was used in the Supplemental Draft EIS instead of information generated by the BLM's standardized and objective data collection methods.*

Response: Rangelands were characterized across the entire ICBEMP area. Since BLM ecological site inventory data were not available for much of the rangeland area in the area, those data could not be

the basis for characterizing rangelands. In addition, the BLM ecological site inventory data and plant association classification system represent fine-scale classifications that are too detailed for broad-scale analysis. However, BLM field experts (and their knowledge of the ecological site inventory data) were used in developing the more generalized, broad-scale vegetation classification and models.

Comment: *The Supplemental Draft EIS uses a study of the timber industry which is based on poor data and erroneous conclusions.*

Some information about the timber industry came from the 1993 Resource Planning Act timber assessment (Haynes et al. 1995) and the Resource Planning Act databases maintained for the timber assessment. Other sources included the Forest Service's cut and sold reports (for price and harvest information) and harvest reports from state natural resource agencies. A book by T.M. Power (2000), *The Economic Impact of Preserving Washington's Roadless National Forests* (report prepared for Wild Washington, University of Montana, Missoula, Montana) was used as one example of another interpretation of the evolution of the timber industry and its relationship to communities and economies. University of Idaho studies were another source used in the underlying assessments.

Comment: *The Science Advisory Group analysis should not assume that low-impact timber harvest methods produce soil disturbance levels similar to those considered typical of natural systems without data to substantiate this assumption. The Science Advisory Group analysis also incorrectly assumes that soil disturbance will decrease, stay the same, or increase by only a small amount if the amounts of restoration harvest, thinning, and prescribed fire increase by 2 to 10 times in restoration and maintenance areas of the high restoration priority subbasins.*

Response: The soil disturbance model used for the Supplemental Draft EIS was an integrated model that used all management activities, ecosystem vulnerability, and net and cumulative areas as soil disturbance input variables. There were no assumptions relative to soil disturbance decrease or increase relative to effects of the activities. The Science Advisory Group made no assumptions about soil disturbance associated with different harvest methods. The Science group did address cost differences between harvest methods and suggested that forwarder systems offer opportunities to lower costs of restoration activities. Outcomes were predicted based on the combined

effects of the input variables. A key factor influencing the lack of increase in soil disturbance in response to the 2 to 10 times increase in area was the Supplemental Draft EIS direction that minimized mechanical soil impacts and concentrated restoration to less vulnerable watersheds in space and through time.

Comment: *The Supplemental Draft EIS underestimates the amount of land that will be included in Riparian Conservation Areas (RCAs).*

Response: The values displayed for Riparian Conservation Areas are intended to provide a relative comparison among the alternatives at the broad-scale. The mapping and preliminary identification of RCAs was completed using broad-scale stream miles data in a Geographic Information System (GIS), which tends to under-represent actual stream miles. More accurate delineation of RCAs will occur during the step-down process, when the broad-scale information is refined based on the appropriate ecological and geomorphic site characteristics.

Comment: *The Supplemental Draft EIS should use the Nature Conservancy/Federal Geographic Data Standard Committee/Society of American Foresters structure classification to model terrestrial species/vegetation associations and compare the results with the model that was used in the Supplemental Draft EIS.*

Response: The Supplemental Draft EIS process was begun substantially before the Federal Geographic Data Committee developed a national vegetation classification standard. As a result, large investments had already been made in vegetation data when the committee standard was adopted. In addition, the vegetation classes used in the Supplemental Draft EIS effects analysis can be easily cross-walked with the committee standard. The Society of American Foresters and Society of Range Management cover type classifications were available and used as a base for that classification, as well as the Nature Conservancy classification. However, neither was comprehensive for all vegetation types in the basin at that time. Because of the broad-scale nature of the classification, the translation or cross-walk would not have had a substantial effect on results because the underlying vegetation communities would not change even if the name applied to them did change. All project data have been converted to the official committee metadata formats.

Comment: *The method(s) and assumptions used to analyze expected effects on peak flows and bedload movements should be described in the Supplemental Draft EIS. If models were used, the Supplemental Draft EIS should disclose whether they were calibrated for the project area and ground-truthed.*

Response: As stated in Chapter 4 of the Final EIS, the estimated effects on hydrologic functions were derived from both quantitative data and qualitative assumptions. Descriptions of the models applied and the inherent assumptions that accompany the use of models when determining broad-scale findings are included in the Evaluation of the Alternatives prepared by the Science Advisory Group (SAG).

Comment: *The Supplemental Draft EIS does not discuss the failure of best management practices to provide protection to watersheds and water quality in the ICBEMP area.*

Response: Evaluation of the effectiveness of BMPs is beyond the scope of this project. Numerous scientific studies have been completed on the effectiveness of BMPs, specifically those related to forest practices (Seyedbagheri 1996).

Responsibilities for protecting water quality are addressed in several sections of the Clean Water Act, including Sections 303, 313, and 319. Specifically, Section 319 (Nonpoint Source Management Programs) requires states to develop a report that describes a process for identifying best management practices to reduce nonpoint sources to the maximum extent practicable, and a state management plan to effect such control. The development and implementation of best management practices (BMPs) is a primary mechanism through which the federal land management agencies work with states to protect and maintain water quality on public lands. BMPs are methods, measures, or practices selected by an agency to meet its nonpoint source control needs. BMPs include but are not limited to structural and nonstructural controls and operation and maintenance procedures. BMPs have been developed by federal land management agencies for application at the national, regional, and local level. BMPs are identified and developed through the land use planning process and their use is generally guided by various memoranda of understanding between state and federal agencies.

If waterbodies do not meet water quality standards even with implementation of existing management measures (including BMPs), then the waterbody is listed as impaired under Section 303(d) of the Clean Water Act. Application of the Forest Service and Bureau of Land Management (BLM) Protocol for Addressing Clean Water Act Section 303(d) Listed Waters, which was adopted for the project area, is expected to provide reasonable assurance that listed waters are addressed in a consistent manner at an appropriate scale and level of technical rigor. Because of the broad-scale nature of the project, the efficacy of existing BMPs is best addressed through application of the step-down process and implementation of the 303(d) Protocol.

Comment: *The Supplemental Draft EIS does not adequately analyze cumulative effects on markets for recycled wood products or alternative fiber substitutes. It also does not adequately assess the value of non-timber social and economic uses of the federal lands such as habitat, heritage resources, air quality, and floodplains.*

Response: While the Supplemental Draft EIS did not explicitly address the impacts of increased recycling and alternative products, these are considered in the Resource Planning Act timber assessment, which was used as the background material on past, present, and future trends in forest products markets.

Comment: *The Supplemental Draft EIS does not sufficiently analyze the costs of the alternatives, nor clearly explain the funding assumptions that were used for each and why.*

Response: The Supplemental Draft EIS explains budgeting and funding assumptions in Chapter 4 (both as assumptions for budgeting and in the Analysis of Implementation Costs and Outputs section) and identifies comparison of outputs at variable funding levels. It also explains that the strategies of maintenance and restoration can be achieved at variable funding levels, and the rates of restoration can be achieved quicker with additional funding. In addition, the Science Advisory Group (SAG) made assumptions on funding as it relates to the nature and types of prescriptions that will cause changes in the landscape as a result of the management direction. These assumptions are described in Appendix 16, Science Advisory Group Assumptions for Modeling the Supplemental Draft EIS Alternatives.

Comment: *The use of a 100-year planning horizon is inappropriate for this decision-making process.*

Response: The Science Advisory Group used a 100-year time frame for long-term projections of ecological effects. Many of the important ecological effects across the project area are cumulative and take years or decades to occur. This does not mean that the Supplemental Draft EIS alternatives are expected to remain in effect for 100 years, but it does mean that the decision makers considered potential long-term, broad-scale effects of their decisions. In addition, the primary use of the 100-year outcome in comparison to the current condition is to provide a relative trend of up, down, or stable, which is an important broad-scale measure.

Comment: *The Supplemental Draft EIS should use the "coarse filter" approach for identifying and conserving representative plant communities.*

Response: The Supplemental Draft EIS takes a coarse-filter approach to conserving plant communities by using broad-scale aggregates of potential vegetation types, cover types, and structural stages to represent fine-scale plant communities. Fine-filter plant community analyses and information on individual plant communities at fine scales are part of the step-down process. Some ecologists define "coarse filter approaches" as those involving reserves and corridors. The Supplemental Draft EIS considered alternatives that included reserve and corridor approaches (Draft EISs, Alternative 7). In addition, the Supplemental Draft EIS addresses "natural areas" as all types of designations managed for natural processes, including research natural areas and wilderness areas.

Comment: *The economic modeling in the Supplemental Draft EIS does not address impacts to all the multiple uses of the public lands, such as energy and mineral exploration and development, or impacts to employment in the recreation sector.*

Response: These trends were discussed in the underlying socio-economic assessment. The Science Advisory Group did not address recreation because no changes were forecast in the recreation opportunity spectrum classifications and no specific reductions in roads were forecasted at the broad scale. The minerals issue involves accessibility; without projected changes in accessibility, little can be said from a science perspective at the broad scale. Recreation

and mineral issues will be more appropriately dealt with during the step-down analysis and planning processes that will occur at finer scales.

Comment: *The Supplemental Draft EIS overestimates the amount of forest that will progress to the later structural stages because the model does not take into account mortality resulting from the lack of fire to reduce stand competition (such as, control overstocking).*

Response: The models used to project effects of Supplemental Draft EIS alternatives by the Science Advisory Group explicitly considered fire, fire suppression, insect and disease tree mortality, stress mortality, and their effects on plant communities (including late successional forests). These findings are documented in the Landscape Effects of the Supplemental Draft EIS effects evaluation (Quigley et al. 2000) and in the Scientific Assessment (Quigley and Arbelbide 1997). The models were validated using the forest vegetation simulator model. Much of the increase in later structural stages is coming from succession of mid seral stands (that were early seral following the fires of the late 1800s and early 1900s) into late seral. Whether or not those projections prove sufficiently accurate in the future is an important topic for effectiveness monitoring.

Comment: *The air quality modeling in the Supplemental Draft EIS is not extensive enough to reliably predict compliance with the national ambient air quality standards from a 16-fold increase in prescribed fire. More extensive modeling and analysis must be conducted before conclusions can be made about impacts to air quality.*

Response: Watershed scale scenarios to assess compliance with national ambient air quality standards were evaluated for typical prescribed fire conditions. These scenarios indicated that compliance could be achieved irrespective of the amount of prescribed fire as long as there was adequate flexibility in conducting mechanical pre-treatment of fuels and in timing in relation to desirable weather and fuel moisture conditions. Broad-scale modeling of total particulates was conducted that assessed the trade-off of not using prescribed fire and risking summer wildfires. This modeling indicated that the risk to air quality was much higher from wildfires than increased use of prescribed fire.

A group of air quality experts, including Environmental Protection Agency specialists, evaluated the ICBEMP assessment and Supplemental Draft EIS

effects analysis. Specialists agreed that the benefits of conducting additional fine or broad-scale model runs for the Final EIS would not provide substantial additional ability to evaluate effects on air quality standards, given the lack of activity-specific location and timing information. This activity-specific location and timing information will not be available until after implementation of the Final EIS, as determined through Subbasin Review, Ecosystem Analysis at the Watershed Scale, and project design and planning. In order to fully resolve the issue there was agreement to include appropriate objectives and supporting standards in the Final EIS and Record of Decision to achieve such enhanced modeling capability and to provide finer-scale effects assessments as part of the step-down process and/or individual land management plan revision/amendment process.

Incomplete, Unavailable, or New Information

Comment: *There is a lack of a final transition strategy, lack of a final guidebook for conducting Subbasin Review, and a lack of a dispute resolution process for interagency collaboration in the step-down process.*

Response: The strategy to transition from current management to the management direction in the Final EIS is described in Appendix 10 of the Final EIS and Supplemental Draft EIS.

The Subbasin Review Guide, although not labeled “final”, has been distributed for use to field offices throughout the project area. It is a dynamic guide that is intended to be refined as those using it make suggestions for improvement.

Disputes that arise during interagency collaboration in the step-down process will be resolved by whatever technique appears most appropriate to the specific dispute.

Comment: *The Final EIS should: (1) indicate the statutory and regulatory basis justifying/supporting the elimination of the biological opinion requirements for inclusion in Alternatives S2 and S3; (2) provide an effects analysis and rationale for eliminating biological opinion requirements regarding “objectives for monitoring plans in accordance with PACFISH and INFISH for implementation, effectiveness, and validation monitoring for logging, grazing mining and recreation, as required in the bull trout biological opinion; (3) indicate the effects and rationale for eliminating the “review, modify, and implement annual operating instructions or term grazing permits to meet appropriate PACFISH or INFISH*

objectives; (4) indicate on what basis, scientific or otherwise, elimination of “road densities of less than 1.0 mile per square mile” (U.S. Fish and Wildlife Service Biological Opinion) from Alternatives S2 and S3 was determined to be valid.

Response: Alternative S1 (continuation of present management) in the Supplemental Draft EIS included the requirements described in the Biological Opinions on land use plans as amended by PACFISH and INFISH because that portrays current management. It has been the intent of the project since publication of the Notice of Intent in 1994, to replace the interim management strategies of PACFISH and INFISH with long-term management direction. The biological opinions related to the interim strategies were not part of Alternatives S2 and S3 because those strategies would be replaced by the proposed decision (Alternative S2). The proposed decision does not alter the Endangered Species Act and its requirement to seek a biological opinion when appropriate. A new biological opinion will be issued with the Record of Decision.

Comment: *Surveys to determine snag abundance require very large sample sizes relative to other general vegetation surveys. This was not recognized until relatively recently, so most past surveys conducted to determine natural snag abundance have therefore grossly underestimated the true abundance of snags. This has lead the Forest Service to underestimate the number of snags necessary to protect species. This new information must be disclosed and documented in a EIS, and it requires a forest plan amendment.*

Response: The interim standard densities for snags depicted in Appendix 12 of the Supplemental Draft EIS were derived following a detailed and extensive review of the literature and a series of discussions with experts. (See Appendix 12, Supplemental Draft EIS for literature citations.) These interim standards become part of each Forest Service and BLM land use plan in the project area through plan amendment with the signing of the ICBEMP Record of Decision. The interim values are intended to be used in designing field projects. A prototype for refinement of these interim standards in response to new and more site-specific information is included in the appendix.

Without completed consultation for each alternative, it is impossible to determine the social, economic, and environmental effects of the alternatives or to get an adequate comparison between the alternatives.

Response: The Supplemental Draft EIS depicts the social, economic, and environmental effects of three alternatives and compares the three alternatives based upon estimated effects. The intent is to complete consultation under Section 7 of the Endangered Species Act for the proposed decision and include the results of that consultation in the Record of Decision (ROD) for the project.

Comment: *Critical items will not be completed until after the ROD, including: EAWS, screening process, soil productivity and restoration programs, recommendations for coarse woody debris, mature and old forest definitions and criteria, management strategies for other species, habitat mapping for recovery plans, assessment of identified places of value to American Indians, or habitat effectiveness rating. In the absence of these documents, the public is not being afforded an opportunity to fully review and knowingly comment on the proposed alternatives or actions.*

Response: A generic definition for old-growth forests is in Appendix 17a of the Supplemental Draft EIS. Recommendations for coarse woody debris are in Appendix 12. Ecosystem Analysis at the Watershed Scale (EAWS) is part of the step-down process described in Chapter 3 of the Supplemental Draft EIS and is intended to be part of implementation following the Record of Decision (ROD). The remaining listed items do not lend themselves to broad-scale direction and analysis. The intent is to develop fine-scale analysis as fine-scale projects are analyzed during implementation through the step-down process.

EIS Document - General

Outcome-based vs. Prescriptive Direction

Comment: *Compare and contrast outcome-based and prescriptive approaches to management direction.*

Response: Outcome-based management direction, such as that described in the Final EIS, relies largely upon describing the desired result of management and suggesting management processes and actions that are expected to achieve that result. It is appropriate at the broad scale (for example, the interior Columbia River Basin), and it gives more discretion to local managers to analyze local conditions and determine what specific management actions are needed to achieve desired outcomes. Prescriptive

management direction relies more upon describing actions that must, or may not, be taken. It is more appropriate at the fine scale (a national forest or BLM district) where resource conditions are less diverse and results of a given action are more predictable.

Chapter 2, Affected Environment

Comment: *The Supplemental Draft EIS does not adequately define the project area. This leads to confusion: some resource characterizations in the Affected Environment chapter appear to vary among federal lands only, others are considered within the Supplemental Draft EIS area border, and occasionally the description includes all western states.*

Response: The project area is defined in Chapter 1 of the Supplemental Draft EIS; Maps 1-1 and 1-2 portray the project area graphically. The management strategy in the proposed decision applies only to the Forest Service- and BLM-administered lands within the project area. Descriptions of the affected environment, on the other hand, included all lands within the project area.

Comment: *Include a discussion of the 1996 severe ice storm that led to an infestation of Douglas-fir bark beetle in portions of Idaho and Washington.*

Response: This particular ice storm is too site-specific to be addressed at the project's broad scale. However, the effect of insects and disease on ecosystem disturbance has been identified in Chapter 2, pages 65 and 69, for example, for each major forest type.

Comment: *There is a need to discuss the approximately 3,400 wild horses and burros which graze year-round in the eastern Oregon and southern Idaho BLM districts.*

Response: BLM land use plans provide the appropriate level of decision for wild horse management. Wild horses are not considered a broad-scale issue needing to be addressed in this project. Localized impacts of these animals are considered during analyses at the land use plan and project levels.

Comment: *The agencies judge the health and integrity of ecosystems by how much they deviate from the historical range of variability. However, historical range of variability depends entirely on what time period researchers assign*

to it and how they interpret available data to reconstruct it. Such an analysis as included in the Supplemental Draft EIS is arbitrary and capricious.

Response: The historical range of variability is a scientific concept that was used as a reference point in this project as described in Chapter 2 of the Supplemental Draft EIS (page 11). The assumptions and scientific underpinnings of this concept are disclosed and identified in the Scientific Assessment. The use of the concept in the Supplemental Draft EIS has been reviewed and found to be consistent with the existing science.

Comment: *There is little historical evidence of the widely spaced forests that current Forest Service timber sales are trying to attain. We believe the bias toward logging has corrupted the Supplemental Draft EIS and that an honest appraisal of stand succession, historical process, and desired future condition must be made.*

Response: Anecdotal information sometimes runs counter to the existing scientific literature. The direction in the proposed decision has been reviewed and found to be consistent with the best available science.

Chapter 3, Alternatives

Alternative S1, No Action

Comment: *There is no way to justify using existing land management plans adjusted for interim policies and biological opinions as your baseline. The interim policies were just that—interim. Having three different “no-action” alternatives is confusing. The no-action alternative should describe current direction.*

Response: The no-action alternative is defined as “continuation of current management.” Alternative S1 describes and represents the relevant direction from the 62 land use plans currently in place; these plans constitute the current direction in the project area. Since the interim policies of PACFISH, INFISH, and the Eastside Screens and their associated biological opinions have been the current management for the past seven years, they were used to define current management in the no-action alternative (Alternative S1) in the Final EIS.

Objectives, Standards, and Guidelines

Comment: *The abundance of objectives and guidelines and paucity of standards leaves the reader with a vague sense that the plan asks managers to pursue worthy goals, while considering various matters, but with almost no sense of what will actually happen, when or where. Guidance should be converted to enforceable standards that protect these ecosystems.*

The Supplemental Draft EIS weakens opportunities for citizen oversight and enforcement of baseline environmental standards.

Response: Outcome-based direction, such as that described in the Final EIS, relies largely on describing the desired result of management and suggesting management processes and actions (through objectives and guidelines) that are expected to achieve that result. This results in fewer standards, which is appropriate at the broad scale, because a standard that is appropriate at the national forest or BLM district level may not be applicable across an area as large as the project area. Prescriptive direction, which contains more standards or required actions, is more appropriate at the fine scale, where resource conditions are less diverse and results of a given action are more predictable.

The proposed decision requires collaboration with state, federal, and tribal governments and officials as well as citizen advisory groups such as the RACs and PACs. The Final EIS retains all current opportunities for public involvement in the implementation of the decision.

Comment: *Objective B-O7 calls for promoting “healthy, productive, and diverse plant and animal communities”—yet there are no agreed-upon standards for determining when a plant or animal community is healthy and when it is not.*

Response: Rangeland health and forest health are defined in the glossary of the Supplemental Draft EIS.

Comment: *There is a need to clarify the legal hierarchy for goals, objectives/outcomes, standards, guidelines, and management intent.*

Response: The hierarchy of management direction is built into the architecture of the strategies and is explained in Chapter 3, page 39, of the Supplemental Draft EIS.

Range of Alternatives

Comment: The range of alternatives included in the Supplemental Draft EIS is far too narrow:
For some respondents:

- ♦ It does not include a viable conservation alternative.
- ♦ There is no true restoration alternative that limits logging, mining, grazing, and other damaging activities on public lands.
- ♦ There should be a no-commercial-logging alternative.
- ♦ There should be an alternative that emphasizes protection and restoration of public resources that includes: a prohibition on road construction, reduction in road density, reductions in logging, protection of riparian areas and streams, and enforceable, accountable, and measurable standards. Restoration without logging and roadbuilding should be proposed and analyzed.

For other respondents:

- ♦ There should be an alternative that increases the amount of commodity uses such as timber, wood fiber, livestock forage, and recreation.
- ♦ Include an alternative that emphasizes aggressive restoration.

Response: The alternatives in the Supplemental Draft EIS and the 1997 Draft EISs have varied combinations of protection, restoration, and continuation of the existing land use plans. The range of human uses and commodity outputs are disclosed in Chapter 4 and in the Report to Congress that was released with the Supplemental Draft EIS. Description as to why a "conservation" alternative was not developed is explained in the Introduction of Chapter 3 in the Supplemental Draft EIS.

A discussion of alternatives considered but not fully analyzed, and a discussion of suggested combinations of alternatives from the draft EIS are found in the Supplemental Draft EIS, Chapter 3, pages 3 and 4. Only those alternatives that could be expected to meet the purpose and need for developing the ecosystem management strategy (see the Supplemental Draft EIS, Chapter 1, pages 9-11) were fully developed and analyzed.

Chapter 4, Environmental Consequences

Comment: The project defers specific analyses and estimates until after a decision is made. This means rules will be enacted before anyone knows many of the effects on society, the economy, or the environment.

Response: The alternatives have been described and analyzed at the scale of the interior Columbia River Basin, encompassing approximately 63 million acres of agency-administered lands. It is not feasible or appropriate to make fine-scale amendments to land use plans using this broad-scale information. However, subsequent activity-level decisions made to implement the direction will be subjected to site-specific analysis and public involvement.

Comment: Alternative S2 is only compared to Alternative S1 and S3. There should be a comparison for all 9 other alternatives.

Response: The scope of the project was narrowed between the publication of the Draft EISs and the Supplemental Draft EIS, making it difficult to compare directly the alternatives described in those two documents. The alternative management strategies described in the Supplemental Draft EIS focus on issues that are best addressed at the basin-wide scale.

Comment: The Final EIS should indicate what analysis was performed to support the determination of effects on listed species and anticipated trends toward improvements per alternative. Indicate whether the determination of effects on listed species and anticipated trends toward improvements per alternative are the result of consultation under Section 7 of the Endangered Species Act. Provide documentation showing outcomes of ESA Section 7 consultation and concurrence on effects determination for the preferred alternative. Indicate on what basis determination of effects on listed species and anticipated trends towards improvements for Alternative S1 was made in the absence of incorporation of the Roadless Area Conservation EIS.

Response: Analysis of the alternatives was performed by the Science Advisory Group and the EIS Team and documented in Chapter 4 of the Supplemental Draft EIS and the Final EIS. Consultation on the proposed decision under Section 7 of the Endangered Species Act will be completed before the Record of Decision is signed, and biological opinions from the National Marine Fisheries Service and U. S. Fish and Wildlife Service will be completed at that time.

The Science Advisory Group assumed that the Roadless Area Conservation Record of Decision will slow the growth of new roads on Forest Service-administered lands in the short and long terms. The

SAG assumptions are presented in the Supplemental Draft EIS, Appendix 16, page 16-5.

Comment: *The Supplemental Draft EIS does not provide sufficient knowledge of cumulative effects to assure timely and effective consultation with regulatory agencies and prevent legal challenges to individual projects during plan implementation.*

Response: Cumulative effects of the alternatives are portrayed in Chapter 4 of the Supplemental Draft EIS, pages 81-110 (for terrestrial species) and pages 122-141 (for effects on native fish and other aquatic species).

Comment: *There are no strategies for cumulative effect analyses at multiple levels.*

Response: The cumulative effects analysis at the basin-wide level is documented throughout Chapter 4 of the Supplemental Draft EIS. Effects of implementation at site-specific levels would be captured through effectiveness monitoring. The intent is for a monitoring strategy to be developed through a collaborative, intergovernmental, interagency, and interdisciplinary process, to be designed to accommodate many geographic levels. Appendix 10 provides a discussion of the development of a monitoring strategy.

Collaboration and Public Involvement

Adequacy of Public Involvement

Comment: *The Supplemental Draft EIS did not include the coordination with individual county governments which are engaged in land use planning as required by Congress.*

Response: During preparation of the both Supplemental Draft EIS and the Final EIS, the EIS Team used a collaborative approach with elected officials from county, state, and tribal governments (along with other federal and state agency staff) to develop and analyze the ecosystem-based strategies. The Public Involvement section of this appendix contains a list of those contacted. The Eastside Ecosystems Coalition of Counties (EECC) facilitated the involvement of counties, assuring that county interests and input were considered by the Science Advisory Group and the EIS Team. This coalition participated actively throughout the process. Project officials also met on numerous occasions with state associations of counties and individual boards of county commissioners

on request. Many county representatives submitted written comments on the Supplemental Draft EIS; their comments were considered in the development of the Final EIS.

Comment: *We recognize and take exception with the fact that many of the key elements in the new planning regulations are already reflected in the Supplemental Draft EIS without the benefit of public input.*

Response: The guidance and direction in the Supplemental Draft EIS, and the Final EIS were based only on the BLM and Forest Service land use planning regulations (36 CFR 219 for the Forest Service and 43 CFR 1600 for BLM) current at the time.

Comment: *The public comment period on the Supplemental Draft EIS should be extended.*

Response: The comments that requested an extension of the the public comment period for the Supplemental Draft EIS were considered. However, based on the desire to complete the process expeditiously, the decision was made to stay with the 90-day public comment period for the Supplemental Draft EIS, which ended on July 6, 2000.

Comment: *We cannot understand the National Environmental Policy Act process as it relates to any plan amendments that may result from this strategy. Please clarify the next steps in the public involvement plan, with comment opportunities identified as to length and availability of documents.*

Response: The Record of Decision will amend 62 BLM and Forest Service land use plans as identified in Chapter 1 of the Supplemental Draft EIS. The extensive public involvement efforts associated with this project since 1994 have provided numerous, often lengthy opportunities for public input on the amendments that will result from the ICBEMP Record of Decision. A 30-day period will be available following publication of the proposed decision to afford additional opportunity for public input. When the plans are ready for revision, further amendment, or updates, a separate NEPA process will be initiated, which will include a planning schedule and public notification process that will identify the timing and opportunities for public involvement. This schedule for revisions, amendments or updates is not available at this time, but can be obtained from individual BLM and Forest Service offices.

Collaboration and Intergovernmental Coordination

Comment: *Nowhere in the document could I find a standard or objective requiring intergovernmental cooperation between USFS and BLM and state fish and wildlife management agency managers.*

Response: The project's Executive Steering Committee defined collaboration as the "relationship among the five federal agencies involved with the project (Forest Service, Bureau of Land Management, National Marine Fisheries Service, U.S. Fish and Wildlife Service and Environmental Protection Agency) and other federal, state, tribal and local government officials. The intent throughout the document is that states (including state fish and wildlife agencies), tribes, and local governments are intergovernmental partners with federal land managers. One example of an objective and a standard requiring intergovernmental cooperation is Objective B-O59 and Standard B-S57, in the base-level Social-Economic-Tribal section of Chapter 3. In other direction (mid-scale planning, Subbasin Review, monitoring, integrated weed management, step-down) there is frequent reference to working with state, tribal, and local governments.

Comment: *The role of RACs/PACs in community collaboration and consensus building, Subbasin Reviews, Ecosystem Analysis at the Watershed Scale, and/or project prioritization is not clear.*

Response: Resource Advisory Councils and Province Advisory Committees (RACs/PACs) are officially designated citizens advisory groups that have the legal authority to advise federal land managers on land use issues. This legal authority (authorized under the Federal Advisory Committee Act [FACA]) gives these groups specific access to the federal decision-making processes. RACs/PACs are intended to be partners with the land management agencies in the process of collaboration on broad-scale plans, land use plans, Subbasin Review, and Ecosystem Analysis at the Watershed Scale efforts.

Comment: *The selected alternative needs to include clear management direction for dealing with tradeoffs and consequences of conflicting management direction, and for resolving conflict during interagency collaboration.*

Response: The Final EIS identifies criteria for an organization that will be created to implement the

ROD. This organization will be chartered to identify conflict resolution techniques and procedures to help resolve issues of interpretation of science and management direction.

Comment: *There needs to be a description of the mechanisms that will be used to expand the role of tribal, state, and county government. Without this description of how increased cooperation will actually function, various units of government cannot accurately determine the potential effects of the Supplemental Draft EIS. There is a need for a statement of legal objective and authority for the proposed action.*

Response: Through direction for intergovernmental collaboration, federal land managers are committed to working more closely with state, tribal and local governments so that their views of land management can be addressed to the extent possible by federal law. No expansion of state, tribal, or county government roles is proposed, but rather more effective uses of existing authorities. Among the mechanisms possible for improving intergovernmental collaboration would the signing of memoranda of understanding (MOUs) or equivalent documents to describe specific procedures for collaborative efforts (Standard B-S57). The definition of collaboration has been clarified in the Final EIS direction and glossary; the glossary describes in more detail various approaches to collaboration intended by the direction

Accessibility to Science

Comment: *The good science developed during the ICBEMP analysis should be provided to local forest managers to review and include in their land use plan revisions as local, site-specific conditions warrant.*

Response: The published Scientific Assessment and other related science reports are available to local BLM and Forest Service managers and are being used as the most current scientific information available. BLM and Forest Service managers are required by National Environmental Policy Act to use the most current scientific information available to make resource management decisions.

Implementation

Accountability and Oversight

Comment: *The Supplemental Draft EIS contains no assurances that the conservation agreements and strategies*

intended to preclude further listings of threatened or endangered species will actually be implemented on the ground.

Response: Standard B-S55 specifically addresses the issue of conservation agreements and strategies. It requires that all management activities be designed and implemented to be consistent with approved recovery plans, conservation strategies, and other appropriate reports.

In addition, there are many check-points within the implementation process to assure that agreements and strategies are implemented. For example, all projects must comply with the National Environmental Policy Act (NEPA). Decisions that result from the NEPA process must reflect compliance with basin-wide strategies; otherwise the decision would be subject to successful appeal or court action. In addition, prior to the final decision, interagency, tribal, and public review will occur, which adds assurance that the proposed action complies with conservation agreements and strategies. Step-down processes (Ecosystem Analysis at the Watershed Scale and Subbasin Review) and the biological evaluation and opinion processes, in areas with sensitive species, will also assure that the proper recovery plan is applied. These processes are subject to interagency, tribal, and public scrutiny. Finally, the ICBEMP Implementation Monitoring Plan calls for review of projects and activities in the basin on a continuing basis to determine if the management direction is being implemented as intended.

Comment: *The agencies do not have the staffing or budgetary or technical capability to implement and evaluate the objectives, standards, and guidelines in the Supplemental Draft EIS. This makes the proposed action infeasible and in violation of the National Environmental Policy Act.*

Response: The strategies in the proposed action will have budget consequences, as all land use plans do. These will be identified by land managers in the normal course of budget development, and ultimately the Congress will determine what aspects of the strategies may get additional funding. In the interim, existing agency budgets will focus on the high priority workload, consistent with appropriations law and national direction.

Comment: *The EIS should include clear direction on how to conduct more up-front collaboration and consensus building, and clarify the meaning of the terms collaboration, consultation, and coordination.*

Response: The Final EIS provides additional detail about the levels of collaboration and who would be involved, and it clarifies intergovernmental and interagency collaboration. The definition of collaboration was also clarified in the glossary.

Comment: *Clarify whether the direction to refine and ground-truth land use plan-level maps of unstable and potentially unstable lands during site-specific National Environmental Policy Act (NEPA) analysis and planning (Standard B-S17) applies to all projects or only those projects where potential effects to unstable and potentially unstable lands could occur.*

Response: The intent is to do land use plan maps first, and project maps second. If there is a potential effect of a proposed project due to unstable and/or potentially unstable lands, this risk would be addressed during NEPA analysis.

Comment: *Some commentors feel that there should be a transition phase after the Record of Decision is signed, and that the implementation process should be defined in detail in the Final EIS. Others want implementation to begin immediately, without a step-down process or transition phase. Still others want the direction in Alternative S1 applied until the step-down process (Subbasin Reviews and Ecosystem Analysis at the Watershed Scale) is completed.*

Response: The transition phase is an important topic that is addressed in the proposed decision and will be covered in the Record of Decision (ROD). Transition is not a new concept to land use plans, and a strategy will be provided to assure that there is no gap in the necessary protection for listed species and other areas of concern.

Comment: *The Record of Decision should encompass all the direction associated with the chosen alternative to help facilitate clear, efficient, and effective project implementation. The Record of Decision should also reference other relevant scientific documents to facilitate discussion and interpretations of standards in relation to the science upon which they are based rather than just the language of the standards themselves.*

Response: The Record of Decision (ROD) is the decision-making document that will amend 62 BLM and Forest Service land use plans with direction analyzed in the Final EIS. The ROD will include the complete package of direction selected from the Final EIS along with supporting information and rationale for the decision. References to scientific and other materials are extensively provided in the EIS, with full publication information provided in the Literature Cited section. Any references cited in the Record of Decision will be also be listed in a Literature Cited section attached to the ROD. Information about the scientific reports and publications developed by the ICBEMP science teams can be found on the ICBEMP Internet web page (www.icbemp.gov). Copies may be ordered from: Publications Distribution, PNW Research Station, 333 S.W. 1st Ave., P. O. Box 3890, Portland, OR 97208-3890 (telephone 503-808-2125). Some of the scientific publications have been published on the following website: www.fs.fed.us/pnw/int_col.htm.

Comment: *The EIS should consider the feasibility of implementing the selected alternative.*

Response: The alternatives were evaluated based on their feasibility. The action alternatives were determined to be feasible at future and predicted levels of funding. In addition, the alternatives are able to accommodate a range of funding levels that may result from future appropriations.

Organization Structure

Comment: *What entity, how many people, and at what cost will the broad-scale management direction be implemented.*

Response: Criteria for implementing the proposed decision are listed in Appendix 10 of the Final EIS. The intent is to rely on existing personnel to the extent possible. The estimated costs of implementation are addressed in Chapter 4 of the Supplemental Draft EIS, pages 204-212.

Comment: *The Supplemental Draft EIS does not provide definitive direction as to how the U.S. Fish and Wildlife Service and National Marine Fisheries Service will appropriately address threatened and endangered species within the context of the EIS.*

Response: The process by which the U.S. Fish and Wildlife Service and the National Marine Fisheries

Service address threatened and endangered species is mandated by the Endangered Species Act. Direction in the Final EIS does not alter existing laws, nor does it direct actions of the U.S. Fish and Wildlife Service or the National Marine Fisheries Service.

Timing

Comment: *Cancel the implementation phase of the document and work with the concepts for 5-10 years to determine what the real effects will be.*

Response: BLM and Forest Service planning regulations require development of land use plans meeting specific requirements and subject to compliance with the National Environmental Policy Act, the Endangered Species Act, and other pertinent laws and regulations. As such, analyses of potential effects must be conducted prior to making final planning decisions. An implementation phase is necessary to put new processes into place, to incorporate the decisions into new management proposals, and to bring ongoing agency programs into compliance with the new direction. The monitoring and adaptive management elements of the plan will evaluate the outcomes over time and identify changes needed to meet desired conditions.

Comment: *The project has dragged on for too long, it is time to move ahead and implement it.*

Response: Implementation will immediately follow signing of the Record of Decision upon resolution of any protests received on the proposed decision.

Comment: *There are too many federal, natural resource initiatives currently being proposed. A decision on ICBEMP should be delayed pending completion of these other initiatives.*

Response: The project is being coordinated with these other initiatives to ensure a reasonable level of compatibility where there is potential overlap. Completion of the project would facilitate analysis and design of management strategies under these and future initiatives.

Comment: *A final decision should be delayed until the next administration has an opportunity to evaluate management options.*

Response: The decision to amend land use plans through the ICBEMP Record of Decision is a plan-

ning decision delegated, through each agency's planning regulations, to the Forest Service and BLM regional executives.

Priorities and Conflicts

Comment: *The Agricultural Lands Potential Vegetation Group (Map 2-6 in the Supplemental Draft EIS) should not be characterized as having a lethal current fire regime as is shown on Map 2-8 in the Supplemental Draft EIS.*

Response: Much of the "agricultural lands" reflected are included in cheatgrass rangelands and are considered "lethal" current fire regimes.

Comment: *The EIS places the highest broad-scale priority for implementing Integrated Weed Management on existing and new populations of weeds in areas within A1, A2 subwatersheds, and T watersheds rated as high susceptibility to invasion by weeds. This standard should be modified to make it a higher priority to treat new invaders rather than existing weed populations in high susceptibility areas.*

Response: The direction of the proposed decision provides for restoration decisions to be made based on local priorities and broad-scale priorities. There will be situations where the most effective strategy is to take immediate action to prevent the spread of a particular invasive weed. In other situations a long-term and systematic strategy is needed to prevent the expansion of a variety of weeds. Both are important and essential to effective weed management. The criteria of A1 and A2 subwatersheds and T watersheds would identify areas where weed invasions are light, if they exist at all. With these conditions, the opportunity to control and possibly eradicate are high. Control and eradication of invasive weeds are key to maintaining high quality habitat (in the case of A1 subwatersheds and some cases of T watersheds) and recovering such habitats (in the case of A2 subwatersheds and some T watersheds), regardless of whether weeds are existing or new invaders.

Comment: *The objective to increase the geographic extent of interior ponderosa pine cover type in the 'stem exclusion closed canopy' structural stages (R-O17) appears to conflict with the objective for dry forest potential vegetation groups to create open stands where the natural disturbance regime maintained open forests of Douglas-fir/ponderosa pine (R-O29). Please clarify.*

Response: Two structural stages of interior ponderosa pine—both the 'stem exclusion closed canopy structural stage', and open stands where the natural disturbance regime maintained open forests of Douglas-fir/ ponderosa pine—are in short supply within the project area. The objectives are to increase both stages within the project area as a whole, recognizing that both stages cannot exist on the same acre. The step-down processes (Subbasin Review and Ecosystem Analysis at the Watershed Scale) will determine specifically where needs and opportunity for either structural stage of interior ponderosa pine exist.

Comment: *The standard that requires Ecosystem Analysis at the Watershed Scale (EAWS) to be conducted when there is a potential for adverse impacts except when the impacts are anticipated to be negligible, short term, and localized in scope (Standard B-S5), appears to conflict with Standard B-S7, which allows exemptions to the EAWS requirements only after Executive Steering Committee (ESC) approval. Please clarify whether ESC approval is required to waive the EAWS requirement if impacts are anticipated to be minimal.*

Response: In the Supplemental Draft EIS, Standard B-S5 provides for an automatic exemption from EAWS requirements if the anticipated impacts are negligible, short term, and localized. No ESC approval would be needed if impacts are anticipated to be minimal. The Final EIS expands the exemption to include limited situations where there is imminent threat or unacceptably high risk to scarce natural, cultural, or historical resources; human life; or property.

Standard B-S7 would allow for additional exemptions for certain other projects, but only after ESC review and approval. The Final EIS rationale statements for B-S5 and B-S7 provide further information.

Comment: *The EIS should contain more direction about how socio-economic considerations will be incorporated into the implementation of ecosystem-based standards, objectives, and guidelines.*

Response: Social and economic direction in the Final EIS is broad in nature, appropriate to the broad scale of this project. These issues will be addressed again in local land use plan revisions or amendments, and in local project-level NEPA analyses.

Comment: *The analysis of livestock effects is biased against livestock grazing because only zero to five percent of the surface area in a watershed can show livestock effects and be classified as low.*

Response: Scientific data show that the historical effects of livestock grazing have been a significant factor causing many of the vegetative changes in the project area over the past 100 years. Much of the direction contained within the EIS is focused on restoration of riparian areas where significant effects of livestock have occurred.

Comment: *The EIS should provide specific direction about how Record of Decision (ROD) implementation and effectiveness will be evaluated and how the results of these evaluations will be used.*

Response: Criteria to establish an implementation organization is provided in the Final EIS. Implementation considerations will be included in the Record of Decision. Separate implementation and effectiveness plans will be developed as referred to in the Final EIS.

Relationship to Laws and Other Plans

Relationship to Laws

Comment: *There is no legal basis for ecosystem management. The plan does not meet the statutory requirements of multiple use or planning (NFMA & FLPMA) which apply to the involved agencies.*

Response: An ecosystem-based management approach to land use planning and management is supported by various statutes such as the Forest Service Organic Act, the Multiple-Use Sustained-Yield Act, the Endangered Species Act (ESA), and the Federal Land Policy and Management Act (FLPMA). These statutes invest the agencies with broad discretion to rely on their expertise to manage lands in a manner deemed to best meet the purposes Congress has delineated. One such purpose is to provide for the long-term sustainability of forest and rangeland resources, including the species that inhabit them. Statutes such as the Forest and Rangeland Renewable Resources Planning Act (RPA), the National Forest Management Act (NFMA), and FLPMA—which outline various procedures to follow in federal land planning—also authorize the use of principles intrinsic to ecosystem-based management (for example, calling for planning to be interdisciplinary, coordinated among agencies,

and based on the best available science). NFMA explicitly directs that diversity of plant and animal species be considered in planning. Moreover, ESA directs agencies to establish and implement a program to conserve fish, wildlife, and plants, including those listed as threatened or endangered. Finally, the National Environmental Policy Act (NEPA), while not imposing substantive duties on the agencies, recognizes “the interrelations of all components of the natural environment,” “the critical importance of restoring and maintaining environmental quality,” and “the responsibilities of each generation as trustee of the environment for succeeding generations.” Further, the cumulative effects analysis required under NEPA’s regulations supports a planning approach that incorporates an ecosystem perspective.

Comment: *No Clean Water Act criteria were built into the Supplemental Draft EIS and it does not develop Total Maximum Daily Load (TMDLs).*

Response: The Clean Water Act (CWA) mandates the BLM and Forest Service to protect and restore the quality of public waters under their jurisdiction. Although the Environmental Protection Agency (EPA) has ultimate responsibility for administering the CWA, states and tribes have primary responsibility for implementing many of its provisions. Federal land managing agencies are designated by the states to assist in CWA implementation.

The broad scale of this project is not the appropriate scale for developing TMDLs. Base-level direction for the action alternatives calls for maintaining water quality and hydrologic processes necessary to support beneficial uses, including healthy riparian, aquatic, and wetland ecosystems. Associated standards require application of 303(d) protocols at watershed and subbasin scales. States have developed TMDL priorities and schedules on a watershed or subbasin scale while providing flexibility to complete finer-scale TMDLs within the schedule. The Forest Service and BLM have established a goal of addressing all 303(d) water bodies within a five-year period.

Comment: *It is not legally or morally sufficient to just “balance” the needs of threatened, endangered and proposed species with restoration objectives; under the Endangered Species Act (ESA), listed species must be protected from uplisting and their critical habitat protected. The National Forest Management Act (NFMA) also requires that viable populations of both native and non-native species be ensured.*

Response: The proposed decision in the Final EIS is designed to protect listed species and to prevent listing of candidate species. As described under the Species Viability and Persistence discussions in Chapter 4 of the Supplemental Draft EIS, the terrestrial and aquatic species effects analyses provide decision makers with the information they need to judge whether federal habitat management meets the viable populations requirements of the NFMA. The concern with restoration involves a weighing of the short-term risks associated with restoration activities against the long-term benefits to special status species from the needed restoration of their habitats. The Final EIS emphasizes minimizing this short-term risk and therefore places greater emphasis on conducting analyses prior to designing and approving management actions.

Comment: *The Supplemental Draft EIS does not meet minimum requirements of the National Environmental Policy Act (NEPA). Local officials, interested publics, and individual citizens cannot determine the effects (including social and economic effects, changes to federal lands if ranchers end their operations as a result of reductions in Animal Unit Months [AUMs]), cost, or level of irrevocable commitment of resources from the EIS. If effects are impossible to identify, there can be no analysis and no informed comment by groups or individuals on how their interests might be affected. The prescriptions called for in the Supplemental Draft EIS make this a site-specific NEPA action and not a programmatic NEPA action.*

Response: The effects analysis in the Supplemental Draft EIS attempts to predict impacts on resources and users at a level commensurate with the broad-scale and more process-oriented nature of the decisions being made. The outcome-based design of the alternatives responds to the degree of variability across the basin and the commitment to avoid establishing "one-size-fits-all" land use prescriptions for all federal lands within the basin. The social and economic analysis has been supplemented with current condition information at the community level, identifying and classifying communities according to their economic specialization and whether they are isolated or not isolated (ICBEMP 1998). This information, along with additional work on socio-economic resiliency at the county level, provided a way to include more discussion about possible effects of changing output and activity levels on rural and tribal isolated and economically-specialized communities, and on factors influencing socio-

economic resiliency over the long run. The step-down process will be used to determine where broad-scale objectives apply on the ground and will provide opportunities for collaborative involvement to mutually establish priorities and recommendations for meeting broad-scale as well as local needs and objectives.

The outcome-based direction in the Final EIS responds to the basin-wide cumulative effects that could not be adequately addressed in individual land use plans. The step-down processes allow local managers to consider site-specific conditions when designing activities to meet broad-scale expected outcomes. As such, this type of direction is not considered site-specific in nature.

Comment: *The direction limits or prevents the decision-making process of local officials. We believe this violates the two-tier decision format identified in the National Forest Management Act (NFMA). The Forest Service illegally uses the ICBEMP strategy to circumvent the detailed requirements of forest planning. The EIS is not sufficiently site-specific to assess the effects of the management direction on timber harvest and other resources. The lack of specificity makes the estimate of resource effects legally inadequate.*

Response: NFMA's two-tier decision format allows for joint planning efforts and consolidation of land use plan amendments. The ICBEMP Record of Decision (ROD), will provide a vehicle for amending 62 Forest Service and BLM land use plans. The direction package will fully reside within those land use plans, as amended, and subsequent activities will be required to conform with those plans. Existing land use plan direction not amended by the ROD remains in effect; therefore, each plan remains intact. The broad-scale approach was necessary to address cumulative effects that are broader in scope than could be effectively addressed in individual planning efforts.

The level of detail in the effects analysis is appropriate to the broad-scale actions being analyzed in this project. The direction includes step-down processes that help determine where broad-scale objectives apply on the ground while allowing local managers to implement those objectives through projects tailored to local needs and conditions.

Comment: ICBEMP must prepare a regulatory flexibility analysis in compliance with the Regulatory Flexibility Act.

Response: Planning decisions, such as ICBEMP, are not subject to regulatory flexibility analysis requirements since they do not constitute “rules” as defined by the Small Business Regulatory Enforcement and Fairness Act. Planning decisions are made under the National Forest Management Act and Federal Land Policy and Management Act and the implementing rules that govern planning.

Comment: The Forest Service is currently implementing Subbasin Review, and the Colville National Forest in northeastern Washington State has been pre-implementing watershed scale ecosystem management projects. Therefore, the plan is being implemented prior to the Record of Decision, which is in violation of the National Environmental Policy Act (NEPA).

Response: Decisions to implement management actions are subject to plan conformance and NEPA compliance requirements. Processes, such as Subbasin Review or Ecosystem Analysis at the Watershed Scale, are not subject to planning and NEPA requirements and can be adopted at any time. Relative to projects, both NEPA and the Endangered Species Act require consideration of new information such as the Scientific Assessment and subsequent ecosystem assessments in analyses of new and ongoing projects. Designing projects to incorporate the new science information is therefore appropriate and can be immediately implemented for projects that are in conformance with the current land use plan. If incorporating the new information results in actions not in conformance with existing plans, projects can still be implemented where the project analysis meets formal plan amendment requirements.

Comment: ICBEMP uses a top-down approach to public land and forest management and is, therefore, in violation of the National Forest Policy Act (NFMA), Federal Land Planning Management Act (FLPMA), and the National Environmental Policy Act (NEPA).

Response: The Record of Decision will provide for a consolidated plan amendment process for 62 Forest Service and BLM land use plans. As such, it meets land use plan-level provisions of both NFMA and FLPMA. The amendments are necessary to incorporate new cumulative effects information relative to

significant forest and rangeland health and endangered species issues, as required by NFMA, FLPMA, NEPA and the Endangered Species Act (ESA). These broad-scale issues could not be as effectively and efficiently addressed through individual plan-by-plan amendment processes.

Comment: ICBEMP is in violation of the Unfunded Mandates Executive Order since the cost of implementing the strategy is not budgeted and will be prohibitive.

Response: Implementation of the proposed decision will be financed, as are most land management actions, through federal appropriations from the Congress. The Final EIS assumes that, at a minimum, current funding levels would continue to be appropriated to the agencies. The action alternatives were designed to “accommodate a range of funding levels so that Congress and the Administration can consider, on an annual basis, the costs and benefits of action and inaction and set an appropriate pace for restoration and management” (Babbitt and Glickman 1998). Two principles underlying the alternatives are that (1) the cost of the alternatives must be realistic with respect to current funding levels for the land managing agencies, and (2) the pace of implementing the alternatives will vary with the amount of funding; however, the emphasis and strategies of each alternative would remain the same regardless of the funding level. As such, the alternatives were designed to be implemented at current funding levels, as well as at increased levels, and the costs and outputs of the alternatives were analyzed at those varying levels.

Comment: The agencies did not determine which areas are suitable and/or “chiefly valuable” for grazing or forage before allocating those areas to grazing, in violation of the Taylor Grazing Act, the Federal Land Policy & Management Act, and the National Forest Management Act.

Response: The broad scale of the analysis and direction is not appropriate and was not intended to make grazing allocation decisions. Because of the variability of conditions within the interior Columbia River Basin, the broad-scale direction is outcome-based rather than prescriptive. The step-down process will use hierarchical assessment information to ensure that local decisions implement broad-scale, outcome-based direction while allowing for actions to be designed to fit actual conditions on the ground. The outcome-based direction will augment existing

land use plans, and ongoing actions will be brought into conformance with these amended plans through step-down and existing program-specific procedures.

Relationship to County Land Use Plans

Comment: *Management direction in this EIS must be reconciled with county land use plans.*

Response: The Final EIS and proposed decision are sent to the governor of each of the four states in the ICBEMP planning area for a consistency review, as prescribed by BLM planning regulations (43 CFR 1610.3-2). This review gives each governor the opportunity to identify inconsistencies between the proposed decision and officially approved or adopted resource related plans, policies, or programs of state and local governments, and to make recommendations in writing to the ICBEMP decision makers.

Land Status, Ownership, and Uses

Historical, Prehistoric Use of Public Lands

Comment: *The Supplemental Draft EIS assumes that the perfect landscape results from purely natural processes.*

Response: The Supplemental Draft EIS focuses on landscape-level processes and functions, in the context of the desires and needs of society. The desired conditions expressed in the objectives reflect both biophysical and social elements, because any discussion of ecosystems is also inherently a discussion about the way humans value and use the land. The EIS Team used the concept of “ecosystem health” to refer to the capacity of forest, rangeland, and aquatic ecosystems to persist and perform as expected or desired in a particular area. The underlying assumption is that the needs of society today, as well as those of future generations, depend on the integrity of physical and biological processes, patterns, and functions.

Effects on Private Lands

Comment: *The project will result in federal management of private land or takings of private property rights. The management direction does not specifically address how private property rights will be affected or disclose other negative impacts to private land or property.*

Response: There can be no direct takings of private property rights from the alternatives analyzed in the Supplemental Draft EIS. The management direction acknowledges that actions on Forest Service- and BLM-administered lands may cause direct, indirect, or cumulative effects on non-federal lands and vice versa. Objectives and standards in the alternatives are designed to reduce off-site negative effects from planned actions or unplanned events on federal lands and to include stakeholders in collaborative assessments and restoration efforts.

Comment: *The adverse effects of noxious weeds on private lands is not mentioned.*

Response: The Supplemental Draft EIS analyzes the broad effects of noxious weeds across the entire basin and, where specific to BLM- and Forest Service-administered lands, the effects conclusions can be extended to adjacent non-federal lands. The Cumulative Effects on Non-Federal Lands discussion in Chapter 4 of the Supplemental Draft EIS provides examples of noxious weeds or fire spreading beyond federal or private lands and concludes that, for these examples, direction in the Supplemental Draft EIS could benefit adjacent landowners indirectly from better controls on noxious weeds and less severe fires.

Land Status

Comment: *The effects and interrelationship on nearby land are not addressed.*

Response: Both the *Scientific Assessment* and the Supplemental Draft EIS cumulative effects analysis addressed resources and interrelationships across all lands within the basin. As stated in Chapter 4 of the Supplemental Draft EIS, under Cumulative Effects on Non-Federal Lands, “Analysis was presented at the basin level, for all land ownerships... to assess potential cumulative effects... These effects are disclosed in individual sections of this chapter.” The level of detail for this analysis is commensurate with the broad-scale nature of the alternatives.

Comment: *The plan should clarify what is meant by goods and services, and it should distinguish between industrial uses and other less harmful uses of the land.*

Response: The Effects of the Alternatives on Annual Level of Goods and Services discussion in Chapter 4 of the Supplemental Draft EIS recognizes

that goods and services “potentially represent a large array of benefits.” The analysis distinguishes between “commercially marketable outputs” and “ecological restoration activity.” Although the term Goods and Services is used generically in goal statements and social and economic effects summaries, resources and land uses that fall under this term are addressed individually in the Chapters 2 and 4.

Comment: *The Supplemental Draft EIS does not explain how access to state lands will be treated under this project.*

Response: As stated under the Valid Existing Rights section of Chapter 1 of the Supplemental Draft EIS, “nothing in this plan can override valid existing rights on Forest Service- and BLM-administered lands.” Under the management direction, access issues will be reviewed through roads analysis and access and travel management planning processes, which are expected to involve state, county, and local government representatives.

Comment: *The XXX Public Utility District is concerned that the management direction may affect the use of BLM-administered lands under our current license or affect the future re-licensing of the XXX Project.*

Response: The Supplemental Draft EIS states that “some reasonable changes may be required in the way activities are carried out” in order “to meet the objectives of an alternative.” At the time of re-licensing of a project, new stipulations potentially needed to bring ongoing projects into line with the new direction would be analyzed and incorporated into the license to the extent provided under agency re-licensing authorities.

Biophysical Components

Soil, Air, Climate Change

Soil Quality and Productivity

Comment: *The Supplemental Draft EIS provides no direction to ensure that future activities will avoid or even reduce further detrimental effects on soils. The preferred alternative proposes extensive thinning of forest stands to restore habitat and reduce risks of severe fire while providing economic benefits to local communities. Because the trees removed are expected to be relatively small and of lower value, there will be considerable incentive to use lower-cost ground-based logging equipment. Although*

the SAG Effects Analysis predicts relatively minor increases in soil disturbance, this prediction is based solely on the assumptions that low-impact equipment and methods will be used and that they will be used properly. The Final EIS should ensure that extensive use of ground-based logging equipment won't perpetuate past problems, particularly soil compaction.

Response: The Final EIS contains broad-scale objectives that direct the agencies to implement land uses in ways that protect, maintain, and restore soil productivity.

Because of the broad variation in landscapes across the project area, it is appropriate for the land use plan amendment and revision process to be used to identify and apply the relevant analysis techniques and prescriptive criteria at the local scale. Through context-setting analyses that result from applying the step-down process, each local unit would develop prescriptions and management techniques best suited to each situation. Therefore, the preferred alternative does not prescribe specific management techniques or locations for applying them, but it does require land managers to apply sound analysis supported by science when planning, designing, and making decisions for implementing site-specific actions that will lead to attainment of predicted outcomes. Proposed and ongoing activities that are not consistent with the management direction regarding soils would have to be designed or modified so they will contribute to the attainment of ICBEMP objectives.

Comment: *The Effects Analysis in the Supplemental Draft EIS identifies grazing as the cause for declining soil production. That conclusion is in direct conflict with BLM data which shows continuing improvement in range conditions.*

Response: The Supplemental Draft EIS describes the causal factors that can result in declining soil productivity levels, which include but are not limited to, wildfire, timber harvest, road construction, and uncharacteristic livestock grazing effects. The effects of the preferred alternative are expected to continue current trends toward attainment of historical soil functions and processes.

Comment: *It appears that the scientific models have produced inaccurate and unreliable results, because some discussions in Chapter 2 are not consistent with the analysis presented in Chapter 4. For example, Chapter 2*

describes soil productivity across the project area as stable or decreasing. Causal factors are said to be “improper implementation of vegetation management activities, road construction and maintenance, excessive livestock grazing pressure, and uncharacteristic wildfires.” In Chapter 4, Map 4-10 shows a majority of the lands in the project area in the “high effect” class for livestock grazing effects. Many of these areas may have already have crossed thresholds to more degraded states. Yet, Table 4-1 reports that 92% of the soils in the project area are currently in disturbance classes of None, Very Low, or Low Disturbance. Please explain.

Response: The data, assumptions, and analyses in the Final EIS use the best available scientific information. Because there is no single source for soil disturbance data for the project area, this information was gathered by the Science Integration Team (SIT) for use in characterizing conditions and trends for Chapter 2 of the EIS. The data are intended to be used for assessing broad-scale trends and are not for use at the fine or local scale. Using this broad-scale data, the *Assessment of Ecosystem Components* (Quigley and Arbelbide 1997) characterized and described the historical and current conditions and trends of the wide-ranging lands of the project area. The *Assessment* also provided information on important processes and structures that maintain ecosystems and supply good and services.

The estimates on soil disturbance provided by the Science Advisory Group (SAG) for use in determining effects for Chapter 4 of the EIS are broad-scale and relative to current conditions. Each subwatershed was classified into a general class or level of soil disturbance (none to very high) for the current time and into the future based on the management direction described in the alternatives. Chapter 4 of the Supplemental Draft EIS (pages 4-13 and 4-14) describes in more detail how the effects on soil disturbance were determined. It is to be expected that conditions projected under the proposed action alternatives displayed in Chapter 4 might be different from the current and historical conditions presented in Chapter 2.

To ensure consistent application of the scientific information, the EIS Team interacted with members of the SAG during development of the Supplemental Draft EIS to ensure correct application and interpretation of scientific concepts, information, and assumptions.

Comment: The Supplemental Draft EIS is unclear about what criteria are used to determine the extent of unstable and potentially unstable lands. Unstable lands should be identified as part of project planning prior to identification through land use plan revisions. Furthermore, the two standards in the preferred alternative that address these lands do not provide binding direction or prohibit new roads or logging in areas identified as unstable or potentially unstable.

Response: The management direction for unstable and potentially unstable lands has been reorganized to improve clarity in the Final EIS.

The direction in the Final EIS is outcome-based rather than prescriptive, and the information and findings in the Final EIS are broad in nature. These factors require land managers to apply sound, science-based analysis when planning, designing, and making decisions for implementing site-specific actions on these areas. There are many scientifically supported methods and techniques that can be used to conduct analysis on unstable lands, and the landscapes in the project area vary widely. Therefore, the intent of the management direction is to use the land use planning process to identify appropriate analysis techniques and apply appropriate prescriptive criteria to manage unstable lands at the local level.

Comment: Please explain how sites with coarse-textured soils can produce sufficient biomass to produce high-intensity high/severity fires if these soils are also most susceptible to becoming water-repellent.

Response: Granitic, coarse-textured soils are common in some dry forest lands, such as the ponderosa pine types. The natural fire regime for these forest types is non-lethal, frequent, and low-intensity fire. Although these sites are inherently dry, the soil litter, tree needles, and understory grasses provide enough biomass to decompose and create water repellent soil conditions when they are burned. In addition, water-repellent soil conditions can be created in these soil types even in the absence of fire because of the very hot, dry conditions affecting biomass decomposition.

Air Quality

Comment: Any effort to return fire to the ecosystem must be balanced with the need to protect public health and air quality. This can be done by using smoke management programs that require burning take place under favorable smoke dispersal conditions, using burning

techniques that minimize emissions, placing emission limits on prescribed burning (as compared to "unlimited" burning), and conducting realtime air quality monitoring.

New regional haze rules will place even greater focus on minimizing emissions and impacts from prescribed fire. The Supplemental Draft EIS should acknowledge that the major increases in prescribed burning could lead to regional haze and plume blight impacts in Class I areas of Interior Columbia River Basin, and include a regional haze impacts analysis and should include a visibility and overall air quality analysis in Chapter 4.

Can states remain in compliance with the Clean Air Act using more prescribed fire, especially considering new emissions standards by EPA? The agencies need to balance the smoke they create with forest land burning on state and private land.

Response: Management activities must conform to applicable state and federal air quality regulations and laws. The Supplemental Draft EIS demonstrates adherence to applicable air quality regulations at the programmatic level, and states that more detailed air quality analyses will be conducted at subsequent planning levels when emissions can be more accurately quantified and the locations and meteorology associated with a specific burn are known.

At the broad scale, implementation of the Supplemental Draft EIS would improve air quality by reducing the total amount of smoke in the air and by spreading that smoke out over more of the year and more of the project area. Prescribed fires would put smoke in the air during spring and fall burning windows that would otherwise be concentrated during the summer fire season some year in the future. Prescribed fires would occur at a time when the weather conditions are conducive to smoke dispersal, reducing the concentration of effects. Ultimately, this would lead to a reduction of the severe peaks in the poor air quality that could be expected in the future due to wildfire.

Global Climate Change

Comment: *The information in Chapter 2 of the Supplemental Draft EIS on climate change should include a discussion of the historical range of variability in vegetation.*

Response: Developing historical ranges of variability from trends in regional climate patterns would be

inappropriate and highly speculative because proxy data must be used to estimate climatic trends for years prior to 1900. Climate change is not expected to be affected from implementing the direction in the preferred alternative, and no additional analysis was done.

Comment: *The Final EIS should examine the climatic change issue in more depth. For example, while the Supplemental Draft EIS notes that there has been significant warming over the last several decades, it does not note that one of the most significant events occurred in the 1950s, a period that also had a corresponding change in salmonid production throughout the Pacific Northwest.*

On the other hand, the Supplemental EIS does not address the real cause of the decrease in biodiversity in the project area, which is the global cooling process now underway. Biodiversity always decreases in an ice age as a natural consequence of cold stress at the higher elevations and higher latitudes.

Response: Global warming, or climate change, is continually being debated within the scientific community. As discussed in the *Scientific Assessment*, which was based on current literature, it is well known that climate change strongly influences ecological processes such as biological productivity, fire regime, soils, streamflow, erosion, and human uses of the land and resources. Climate has always changed over time, resulting in continuous adjustments by aquatic and terrestrial ecosystems. However, it is unknown how much human activities have contributed to the documented changing climate patterns in the Pacific Northwest and globally. The level of analysis needed to address the issue of global climate change is beyond the scope of the ICBEMP EIS.

Disturbance Processes and Mechanisms

Disturbance Processes

Comment: *Static steady-state old forests cannot be maintained because landscapes are dynamic and will be replaced through natural disturbance. Yet the alternatives propose steady-state management approaches for permanently designated riparian areas, wildlife corridors, landslide prone areas, and recreational facilities.*

Response: The Final EIS proposes that some areas in the project area be managed in a conservative way in

the short term. These areas include Riparian Conservation Areas, A1 subwatersheds, T watersheds, landslide prone areas, and areas where threats to threatened or endangered fish species exist. The Final EIS recognizes that these areas are changing and cannot be held in the present condition forever; however, important resources in these areas are perceived to be at risk from management. The intent of step-down analyses is to reduce the overall risks to resources while maximizing the opportunities to conserve and restore these resources. The step-down process will help identify where risks are acceptable and the types of activities that will be needed in these areas.

Comment: *Timber companies will be adversely affected if the Forest Service does not provide adequate levels of fire prevention and suppression, or if it does not control insect and disease infestations that adversely affect forest health.*

Logging, as a prescribed remedy, treats only a symptom of the problem of fire suppression. Without fundamental changes to fire suppression policy the primary problem will continue and the Forest Service and the BLM will never have the workforce or the budget to keep up with the increasing problem of conifer encroachment.

The Supplemental Draft EIS needs coverage of forest health threats regarding insect, fire, and disease potential that is adequate to prioritize the aggressive treatment so vitally needed.

Otherwise, culmination of this analysis will be a repeat of the 1910 fire, 1934 fire, 1929 fire, Tillamook fire, etc.

Response: Alternatives S2 and S3 in the Supplemental Draft EIS provide strategies to plan and conduct restoration activities across the project area that reduce the prevalence of and increase resilience to uncharacteristic disturbances such as insects, disease, and fire, among others. For example, in Chapter 3 Objective B-O9 (page 54) and restoration objective R-O2 (page 102) address these concerns specifically. Alternative S2 and the proposed decision are expected to lower the level of wildfire on Forest Service- and BLM-administered lands in the long-term using activities such as prescribed fire, "wildland fire use for resource benefit," and fuel reduction, to create sustainable vegetation patterns and disturbance regimes that society and ecosystems can accept (see Chapter 4, page 188). The need for wildfire suppression or control of insect and disease infesta-

tions should decrease as healthy and sustainable vegetation patterns increase.

How aggressively restoration activities are applied to any specific area will depend on the budgets available for restoration use and the risks to other resources in that area. For instance, where threatened or endangered species exist, the area may have lower priority for restoration because of potential risk of disturbance to those species.

Comment: *No scientific evidence exists that timber harvests, roads, and livestock grazing are rational ecological surrogates for natural disturbance regimes. Given the historical track record and the present political/bureaucratic linkages, the opposite could be argued.*

Response: Both the baseline direction and the restoration strategy in Alternatives S2 and S3 in the Supplemental Draft EIS address these concerns. Baseline direction focuses on preserving management options and preventing further declines in landscape processes and functions (for example, Objectives B-O7 and B-O10 and Standard B-S12). The intent of landscape restoration direction is to repattern vegetation and disturbances and to restore watersheds and streams, to a condition more consistent with landform, climate, and biological and physical characteristics of the ecosystem (for example, Objectives R-O2 and R-O4). The most effective types and mix of restoration activities will vary depending on the emphasis or priority in an area. Appendix 14 describes the types of activities that could be most effective in areas with different emphases. Thinning, harvest, prescribed fire, and other restoration activities can be used to resemble needed effects such as reduction of fuels, elimination of fuel ladders, and growing space for the larger residual trees. The result is a more sustainable and vigorous ecosystem that is more resilient to natural disturbances.

Comment: *Dead brush, etc. increases the risk of damage from a fire. It should not be burned or otherwise destroyed, but recycled.*

Response: At the finer scale, local managers can choose to recycle. However, at the broad scale addressed in the Final EIS, costs of recycling material such as brush are prohibitive. Prescribed fire, which can be done on a much larger scale, brings benefits such as nutrient cycling and creation of seed beds in addition to fuel reduction.

The retention of snags and other woody material for the benefit of animal species, soil function, etc. is addressed on in Chapter 3 pages 68-70, of the Supplemental Draft EIS.

Comment: In Chapter 3 page 62, B-O22, could you clarify what this means, where a Forest Plan prohibits the use of prescribed natural fire in wilderness. Would this standard apply to the BLM?

Response: The wording chosen in this objective specifies that it would apply only to wilderness areas designated by the U.S. Congress. BLM wilderness study areas would not be included under this objective.

Comment: Many comments ask that the Final EIS restore fire as a natural ecological process. Many other comments address the pros and cons of fire as a management tool:

- ♦ The Final EIS should emphasize the use of prescribed natural and management fire to reduce fire risk.
- ♦ Prescribed fire is the best way to restore old growth ecosystems to their original condition.
- ♦ Risks from prescribed fire include burning the entire organic soil layer or exposing large areas of soil. The intensity and magnitude of set fires cannot be controlled with any certainty.
- ♦ More emphasis should be placed on the use of mechanical vegetative treatments.
- ♦ The alternatives propose to allow 20 to more than 40 percent of the forest to naturally burn every decade. The project relies too heavily on prescribed fire plans to restore forest health.
- ♦ The ability of the Forest Service and the BLM to accomplish necessary levels of prescribed burning is over estimated.
- ♦ When the number of acres planned for prescribed burning increases dramatically, as it would under Alternative S2, what other mechanisms will exist to help meet targets when they physically cannot be met with fire?
- ♦ The Los Alamos Fire showed the danger of relying too heavily on prescribed fire as the main restoration tool in forested habitats.
- ♦ Collaborative efforts are needed to achieve as much of an increase in prescribed fire as possible.
- ♦ More balance between proposed harvest and prescription burning is needed to alleviate the problem of funding.

- ♦ Active management using mechanical treatment offers the opportunity to restore vegetation patterns and disturbance regimes without the risk of catastrophic wildfires or Los Alamos type accidents, while sustaining rural people and traditional industries.
- ♦ Commercial thinning and stewardship harvesting might be the better approach [compared with prescribed fire].

Response: Although the Final EIS proposes a large increase in the use of prescribed fire, the predicted increase would be a combination of mechanical thinning and prescribed fire. Mechanical thinning is needed to reduce fuel levels before prescribed fire can be applied so that desired objectives can be met safely. Thinning and prescribed fire each have benefits that the other cannot provide.

Both the baseline direction and the restoration strategy in the Final EIS address these concerns. For example: Objectives B-O14 through B-O22 and Standards B-S18 through B-S21 discuss fire management, including when and where to use prescribed fire. Objective R-04 describes the use of an "integrated mix" of restoration activities including silvicultural practices, rangeland management, noxious weed control, and prescribed fire to repattern vegetation and achieve sustainable landscape conditions using management activities appropriate for the management emphasis of an area. Objective R-05 discusses practices in the urban-rural-wildland interface. The Science Advisory Group analysis of effects predicts that the proposed large increase in thinning and prescribed fire can be accomplished without undue risk to persons or property and without exceeding clean air standards. Evaluating risks and predicting effects will happen through analysis and collaboration. Objectives such as B-O59 address to collaboration issues.

Removing commercial products when possible is desirable because it helps pay for restoration activities and provides products for economic support of nearby communities. Mechanical thinning has some advantages. It gives more control over the composition and arrangement of the residual stand, does not have to be done during short weather windows, and can produce economically valuable products that can cover the cost of the restoration. Objectives such as B-O64 address economic issues. However, most of the byproducts from this type of thinning may be too small or too poor in quality to be merchantable.

Prescribed fire, when that is an option, is more economical than a non-merchantable mechanical thin.

Comment: *Spring burning is far too dangerous for bird fledglings, young mammals in burrows, and sensitive flowering plants; it also decreases retention of moisture in soils and decreases replenishment of the underground water table. Please ban all spring burning.*

Response: Although spring prescribed fire has its risks, it can bring greater benefits to wildlife and plant species. Prescribed fire will recycle nutrients and invigorate plant growth. Unlike many wildfires, prescribed spring fires are generally not intense, are more patchy, and their effects are not as severe. During spring, soil moisture levels are generally at their maximum and site recovery is rapid. B-O19 directs the use of fire to be balanced with other specific environmental concerns and B-G28 suggests that prescribed burning be conducted during the time of year when fire would have normally occurred if resulting effects match desired outcomes and if fire can be controlled within a defined target area.

Comment: *I would like to see less fire suppression as wildfires are part of the natural process in the environment.*

Response: The intent of the Final EIS is that over the long term, the need for wildfire suppression will be reduced. However, at the present, the need for fire suppression may be increasing because of the large amount of fuels and the continuity of fuels, the trend in increasing size of wildfires, severe effects of wildfires, and the risk to public property and safety.

The proposed decision is expected to lower the level of wildfire on Forest Service- and BLM-administered lands in the long term using activities such as prescribed fire, "wildland fire use for resource benefit," and fuel reduction, to create sustainable vegetation patterns and disturbance regimes that society and ecosystems can accept (see Supplemental Draft EIS, Chapter 4, page 188). The need for wildfire suppression should decrease as healthy and sustainable vegetation patterns increase.

Wildfire and Suppression

Comment: *The EIS states that effects from uncharacteristic wildfire are expected to increase slightly under Alternative S1, and decrease in Alternative S2 and S3, with Alternative S2 slightly better on Forest Service- and*

BLM-administered lands in the long term. Clarify which Guidelines, Standards, or Objectives allow these effects to be stated.

Response: It is the combination of the total package of the management direction (all objectives, standards, guidelines, and intent) that lead to the expected effects, including uncharacteristic wildfire, as predicted by the Science Advisory Group.

Comment: *Some respondents say to manage wildfire with low impact techniques. Others think that many wildfires are necessary and should not be controlled.*

Response: One of the biggest impacts to the forest ecosystems of the project area is the addition of permanent human dwellings, and other property, both public and private. This makes it very dangerous to let wildfires burn, especially in the urban-rural-wildland interface. Fuel reduction should decrease the likelihood of loss of life or damage to property from wildfires. Objective R-05, for example, directs fuel reduction through a variety of techniques in the urban-rural-wildland interface. Standard B-S21 and Objective B-O20 address fire management plans and fire response planning.

The Forest Service and BLM have set a nation-wide priority of protecting life and property. This precludes allowing wildfires to burn except in very remote locations, under somewhat moist conditions and in favorable weather. Fire managers are often not willing to risk using low impact techniques of wildfire suppression because of their lack of effectiveness. This is not expected to change until prescribed fire is more common on a given landscape.

Comment: *We are concerned about the impact of smoke from prescribed fire on air quality. With increases in prescribed fire, can states remain in compliance with the Clean Air Act? The agencies need to balance the smoke they create with forestland burning on state and private land. While people may agree in principle with restoration harvests and reducing fuel hazards, they often object to smoke well below the legal thresholds.*

Response: One focus of the Final EIS is the protection of air quality through collaborative management of the effects of prescribed fire smoke and, in the long term, reduction of the size of wildfires. (See Objectives B-O14 and B-O15). In addition, the risks and benefits to air quality through prescribed burning will

be compared with the risks and benefits of alternative methods of modifying vegetation, habitat, and fuels (see Standard B-S18, among others). Although in the short term air quality may diminish in some locations during times of prescribed burning in the spring, this plan should lead to an overall improvement in air quality. The amount of smoke produced by prescribed fire, as modeled by the Science Advisory Group, is not expected to exceed air quality standards set by the Congress.

The Final EIS also mandates collaboration among administrative units and federal, state, tribal, and local air-quality-management agencies (Objective B-O16, among others). The intent is to preclude impacts from multiple sources that could collectively produce severe visibility problems or particulate levels that present health risks.

Comment: *Wildfire is a natural ecosystem process. The "catastrophic" label is an anthropogenic and emotionally laden descriptor. Mother Nature does not qualify her actions. The specter of wildfire and its potential effects on aquatic ecosystems has been over-hyped and distorted. Poor fire management has created unnatural fire regimes and conditions. There is no evidence that more timber sales and a little prescribed burning will alter this situation.*

Response: The term "catastrophic" is not used in the Final EIS. The term "uncharacteristic" is used specifically in reference to disturbances that are outside what would normally have occurred historically and that have more severe effects than expected. It is an indication that the disturbance regimes and the vegetation patches, patterns, composition, density, and structure are out of sync with the biophysical characteristics of the site. Historically, the role of fire varied across the project area with land type, climate, and vegetation type. However, fire suppression has led to changes in vegetation composition and structure and to increased fuels, which have significantly increased the intensity and severity of fire in most vegetation types (see Supplemental Draft EIS, Chapter 2, pages 37-89). The most effective types and mix of restoration activities, which include prescribed fire, thinning, and harvest, will vary depending on the emphasis or priority in an area and are described in Appendix 14. Evidence shows that when thinning and prescribed fire are used on a small scale, effects can be overwhelmed by landscape-scale disturbances. However, when thinning and prescribed fire are carried out on a larger scale, they can lessen the intensity of the disturbance.

Comment: *Statements in chapter 2, pages 225 and 226 of the Supplemental Draft EIS, such as "Most forest health problems are in areas that have been roaded and harvested," and "Fire exclusion effects have been greatest in the most heavily roaded areas," are incorrect.*

Response: These statements refer specifically and respectively to the moist forest and dry forest vegetation types and their associated location, productivity, and history of natural and human-influenced disturbances (Hann, Jones, Karl, et al. 1997). In general, roadless and wilderness areas have more similarity to historical conditions than areas with roads because less harvest has occurred and because fire exclusion has been less successful. However, fire suppression has led to changes, both in roadless and roaded/harvested areas, in vegetation composition, a shift toward shade-tolerant trees, a higher proportion of denser, multi-storied stands, and a more contiguous, larger proportion of the landscape in the mid-seral stage. The result is more uncharacteristic insects and disease, as well as uncharacteristic fire, a condition also called "forest health" problems.

Prescribed Fire

Comment: *Good intentions do not keep fire from burning out of control. Recent examples in California and New Mexico give this process an undeserved reputation.*

Response: The Forest Service and BLM have many rules and regulations governing the use of prescribed fire, including planning and preparation. These procedures were created to prevent accidents and reach the intended objectives. The Forest Service and BLM have an exceptionally good record in their use of prescribed fire. The experience gained with each fire season continues to improve on that dependable safety record.

Comment: *Standard B-S19 indicates that prior to any prescribed burning the existing air quality network should be identified and described. B-S19 should be amended to specifically indicate that wind roses that show prevalent wind direction, wind frequency, and wind speeds be disclosed in all analyses of prescribed burning projects.*

Response: Objectives B-O16 and B-O17, among others, provide direction for collaborative planning among air-quality-management agencies and public and private landholders to manage particulate emissions and protect life and property. Objective B-O19 directs the use of fire to restore or sustain

ecosystem health based on sound scientific principles and information and in balance with other societal goals. Specific techniques to achieve this objective are left to the discretion of local managers.

Fuels

Comment: *The plan calls for aggressive thinning and logging to mitigate fire danger. However, scientific evidence shows that past logging and road building increases the risk of fire.*

The EIS does not acknowledge that logging often increases fire fuel loads by removing the large logs that are relatively less prone to burn. Thinning also increases wind and light penetration of the canopy and causes fuels to dry, which make them more prone to burn and increases the time it takes woody material to decompose.

Efforts to repair the damage caused to ecosystem integrity by fire suppression, road building, and logging by simply proposing more of the same are misdirected.

Dr. James Agee's (1996) research has demonstrated that reducing ground fuels is the most effective treatment to prevent crown fires, while thinning tree canopies results in hotter, drier, windier conditions on the ground surface. Similarly, Forest Service Chief Mike Dombeck has stated that 87 percent of the areas at high risk for catastrophic fire on National Forests are in roaded areas, while only 13 percent in roadless areas. The Sierra Nevada Ecosystem Project Report (USFS 1996) also states that, "mechanical treatments fail to mimic the numerous ecological effects of fire."

Response: Thinning and harvest will be needed in combination with prescribed fire to achieve restoration objectives in the forested ecosystems. Objective R-04, among others, directs the use of an "integrated mix" of restoration activities including silvicultural practices, rangeland management, noxious weed control, and prescribed fire. Due to many years of wildfire, fuels have accumulated in the forests of the basin such that prescribed fire can no longer be used safely in many places without a mechanical pretreatment.

The effects of thinning vary depending on forest and fuel structure following thinning, environment, fire conditions and other factors. There is no single approach that works in all forest types, hence the requirement for step-down analysis in project design. When done properly, thinning does not increase fuels

and does not dry the fuels faster. Thinning reduces the total evapotranspiration in a forest by reducing the amount of vegetation on a site to pull water from the soil. In this way, it leaves the soil moister and the higher moisture content in the remaining vegetation makes it more resistant to burning. The timber harvest proposed in the Final EIS, called "stewardship harvest," favors leaving large trees and shade-intolerant trees in a more healthy and vigorous forest. Stewardship harvest also recognizes the need for snags and downed woody debris and also other resource needs as the harvest is planned and conducted. Thinning and stewardship harvest reduce fuel loading and ladder fuels, and relieve stress from competition between trees, giving the residual trees space to survive and grow. The result is a more vigorous and healthy stand of trees and a forest that is resilient to fire.

The Scientific assessment discusses the effects of stand management on fire in the interior Columbia River Basin. A more recent review (Graham et al. 1999) suggests that intermediate levels of stand thinning can have mixed effects on subsequent fire behavior. Thinning can reduce the severity and intensity of wildfire, but may not reduce the potential for crown fire, except in dry ponderosa pine forests. Graham et al. (2000) found that moderate or heavy thinning may be required to "fire-proof" stands.

Comment: *For some respondents:*

As with the Los Alamos fire, where grazing and other natural resource use/management is reduced or eliminated, the potential for fire disaster is greatly amplified.

The alternatives appear to be willing to sacrifice forestland to wildfire rather than put these lands under stronger forest management scenarios.

A very large and catastrophic fire will blacken the unroaded and unmanaged areas of national forests. It is probable this fire will occur within the next 10 years.

For other respondents:

The agencies' own science does not support the idea that fire suppression has altered these systems. Most public forests were never dry open stands of ponderosa pine. In any case, roadless areas have been less manipulated and fire has played a more significant role in those areas in the past 60 years.

The Final EIS should prohibit use of prescribed fire in wilderness areas. It should also exclude prescribed fire

from inventoried roadless [areas]. These areas are the only remaining natural and wild areas that exist in the lower 48 states. They should be left alone, and allow nature to determine what part of the forest should burn, and what part should not.

Response: Historically, the role of fire varied across the project area with land type, climate, and vegetation type. However, fire suppression has led to changes in vegetation composition and structure and to increased fuels, which have significantly increased the intensity and severity of fire in most vegetation types (see the Supplemental Draft EIS, Chapter 3 pages 37-89), and especially in the dry and moist forests. Through active fire suppression, past and present, wilderness and roadless areas are altered already.

Currently, much of the land within wilderness and roadless areas exhibits more similarity with historical conditions than other areas. However, because of lack of low intensity disturbances and very little restoration work, wilderness and roadless areas are expected to show less similarity in vegetation composition; a shift toward shade-tolerant trees; a higher proportion of denser, multi-storied stands; and a more contiguous, larger proportion of the landscape in the mid-seral stage, in the future. This will lead to uncharacteristically large, intense fires that are difficult to stop in drought years during dry, windy weather. This can make recovery more difficult and in extreme cases can altogether change the path of natural succession.

Active management is precluded by law in wilderness, so this condition is not expected to change. Prescribed fire is often difficult or cannot achieve objectives without a mechanical pretreatment, and surrounding resources and property are in danger when natural fire is allowed to burn in wilderness during dry conditions. The most effective types and mix of restoration activities will vary depending on the emphasis or priority in an area. Appendix 14 of the Supplemental Draft EIS describes the types of activities that could be most effective in areas with different emphases. Maintenance and restoration of fire regimes using a variety of techniques are a high priority in T watersheds and A2 subwatersheds in the proposed decision. Because the emphasis is on conservation, active restoration activities would be limited in A1 subwatersheds and wilderness areas.

Insects and Disease

Comment: Provide rationale for the statement in chapter 4 of the Supplemental Draft EIS on page 65 (2nd paragraph): "Much of the uncharacteristic insect and disease activity is expected to be in wilderness areas."

Response: Historically, the forests of the project area were naturally thinned by low intensity wildfire. Over the past 50 to 100 years, these fires have been suppressed in forests, including wilderness. In the Final EIS alternatives, much of the Forest Service- and the BLM-administered lands outside wilderness would be treated in an effort to restore them to a healthier condition. Because this restoration will not take place in wilderness and fire levels will remain far below historical levels there, the forests in wilderness are expected to become even more dense, leading to stress and insect and disease problems.

Comment: Opportunities exist for improving insect and disease resistance in all forest structures. Further reduction in uncharacteristic insect and disease activity should be a pursued goal.

Response: There are opportunities to greatly reduce the amount of uncharacteristic insect and disease in future forests of the project area. The Final EIS provides strategies to plan and conduct restoration activities across the project area that reduce the prevalence of and increase resilience to uncharacteristic disturbances such as to insects, disease, and fire, among others. For example, in Chapter 3 of the Supplemental Draft EIS, baseline Objective B-09 (page 3-54) and restoration Objective R-02 address these concerns. The proposed decision would be the most effective at reducing uncharacteristic insects and disease, by moving forest conditions closer to their historical range of conditions. The uncharacteristic insect/disease problem would be reduced through activities that thin dense timber stands, give growing space to trees, and make the trees more vigorous, such as thinning, harvest, or prescribed fire. However, some uncharacteristic insect and disease outbreaks would still be expected because of the extent of the problem needing attention and the lack of active restoration treatments in wilderness.

Forest Health and Management

Succession and Disturbance

Comment: The management direction frequently describes succession as predictable. However, in other

areas, the direction indicates that because of disturbances, succession is not predictable.

Response: The general broad-scale pathways of vegetation development are predictable over several decades or longer and were used to model vegetation change and the influences of various disturbances. The development of finer-scale vegetation conditions following disturbances or due to succession without disturbance is less predictable when viewed at broad scales because specific information on site environment, seed sources, disturbance characteristics and other factors is usually not available. Succession itself goes through a generally predictable progression of stages in the absence of disturbances. Disturbances can either move succession back to an earlier stage or can accelerate succession.

Comment: Early forest management direction should address the need to foster the development of shrubs.

Response: Forest shrublands (in all structural stages) were identified as a coertype in short supply across the basin. In order to maintain and promote these coertypes and habitat areas that are in short supply, T watersheds were identified and mapped. The "source" habitats (in this case shrublands), within T watersheds, would be managed to maintain and secure these areas in the short-term (10 years); in the long term they would be managed to facilitate the expansion and connectivity of these areas. Restoration direction (Guideline R-G13) also promotes the use of prescribed fire to reduce woody species such as ponderosa pine, juniper, Douglas-fir and mountain big sagebrush, on sites where they are displacing the native understory vegetation and where perennial grasses are still present in adequate amounts to permit fire.

Comment: Additional direction is needed to assist local managers in implementing defined forest management strategies, such as those to address the appropriate balance between the use of prescribed fire, harvesting, and mechanical treatment techniques to reduce fuel loading and the risk of large wildfires.

Response: The most effective types and mix of restoration activities will vary across the landscape. For example, restoration activities in A2 subwatersheds might focus on aquatic/hydrologic restoration and the reduction of adverse road effects, whereas restoration in low and mid-elevation old forests might include silvicultural techniques and prescribed

fire to accelerate the old forest characteristics of the area. Appendix 14 of the Supplemental Draft EIS provides local managers with descriptions of the types of activities that could be most effective in areas with different emphases or priorities.

Forest Potential Vegetation Groups

Comment: The potential efficacy of thinning in moist forests is controversial and not well understood. Moist forests cover a wide variety of biophysical environments, support more tree species than other forest types, and reflect a complex fire regime complicated by fire exclusion and logging. These complexities and uncertainties should be reflected in a more conservative approach than is currently expressed in Objectives B-O30 and R-O2. In addition, these two pieces of direction should be reconciled with Objective B-O29 in favor of retaining habitats for Terrestrial Families 1 and 2.

Response: The expected outcome of implementing the preferred alternative (specifically, Objectives B-O30 and R-O2) is an increase in dry or moist old forests. Late-seral moist forests are projected to recover to at least historical amounts over the long term. Late-seral, single story lower montane and montane forests, however, are not expected to recover to historical amounts. These forest types require relatively frequent fire or other disturbance to reduce understory densities; hence, the direction calls for some level of prescribed fire or thinning in many of these forests. For Terrestrial Family 1 (low elevation old forest family) and Family 2 (all elevation old forest family) single story forests are the most scarce source habitat. In many cases thinning, or a combination of thinning and prescribed fire, is needed to restore these single story forest habitats.

Comment: How does the management direction apply in areas where, historically, stand-replacement fires were the norm? Examples of these areas include upper elevation, uneven-aged forests of lodgepole pine, alpine fir, and spruce.

Response: Where the historical disturbance regime was stand-replacing wildfires, the intent is to restore a mix of vegetation patches and patterns appropriate to that part of the landscape and promote a disturbance regime that sustains it. These objectives can be achieved through the use of prescribed fire and/or timber harvest. However, restoration of lower elevation, dry forests is generally a higher priority than restoration of high elevation, uneven-aged forests.

Forest Land Restoration

Comment: *Restoration Objective R-O27 implies that forest health treatments will at some point occur in riparian areas. Restoration silviculture should be presumed to be inappropriate in riparian areas unless a clear showing can be made that management objectives cannot be met without it.*

Response: Much of the riparian woodland areas in the basin have been altered by activities such as road construction, timber harvest, and livestock grazing. Restoration of these important areas is intended to restore riparian habitat, processes, function, and connectivity. Restoration efforts are intended to focus on increasing diversity and improving the structure of riparian vegetation, banks, and bank stability. Restoration efforts in riparian areas would be designed to minimize risk to riparian and aquatic values. The objective is to design restoration activities that resemble effects of natural processes such as stream channel form, large wood, stream flow and sediment regimes. Any silvicultural treatments in these areas must achieve these objectives.

Forest Vegetation Composition and Structure

Comment: *The management direction does not reflect the following Hann and Wisdom et al. discussions of stand regeneration: "The commonly employed 5-year regeneration objective of accelerating the regeneration process by planting may have shortened the time that stands remained in the early seral stage. Planting in post-fire habitats may also shorten the duration of the stand initiation stage. The practice of planting also often reduces the abundance of herb, forb, and shrub structure from early-seral stands."*

"Allow natural development of early-seral, and post-fire habitats rather than accelerating reforestation in order to increase the representation of early seral shrubs where appropriate for the biophysical environment."

Response: The science analysis of potential effects of the Supplemental Draft EIS alternatives pointed out the importance of restoring open meadow, grassland, and forest mosaic conditions, since they historically occurred and were important habitat in some lands that are currently forested. Management direction calls for re-establishing the composition, structure, and pattern of vegetation across the landscape. This would include re-establishment of

grasslands and shrublands appropriate to local environments and potential vegetation types. There are legal requirements to re-establish forests within 5 years following timber harvest. This requirement does not apply to the restoration of burned areas, however. Those areas can be managed to restore historical proportions of vegetation types including shrublands and grasslands.

Comment: *The Supplemental Draft EIS should provide greater protections for snag habitat.*

Response: The management direction proposes to maintain and/or recruit numbers, species, and sizes of snags and levels of downed wood to meet the needs of wildlife, invertebrates, fungi, bryophytes, saprophytes, lichens, other organisms, long-term soil productivity, nutrient cycling, carbon cycles, and other ecosystem processes. Standard B-S28 requires that local managers maintain and/or recruit snag and coarse woody debris numbers, species, and sizes within the desired range for RAC/PAC areas as established in Standard B-S29(S2) or for a watershed through the process in Standard B-S30(S2). If it is not possible to estimate snag numbers or coarse woody debris levels within a watershed, then managers are required to leave or recruit the number of snags and levels of coarse woody debris indicated by the desired range. If current snag numbers or coarse woody debris levels are estimated to be less than the desired range for a watershed, they must leave or recruit appropriate amounts of snags and coarse woody debris to move toward the established range. The tables in Appendix 12 of the Supplemental Draft EIS are to be used to determine snag numbers and coarse woody debris levels whenever vegetation management is done.

Other snag guidelines include leaving or recruiting additional snag numbers and coarse woody debris levels in areas that have been burned.

Comment: *While we support return of western white pine and white bark pine to local ecosystems, the direction and flexibility to accomplish this important objective is missing. Active management to accomplish this is in conflict with the aquatic goals and management limitations in the upper Clearwater Basin. The decline in both species has everything to do with blister rust and nothing to do with past logging levels. Some major drainages in our area have experienced a decline in western white pine from 44 percent to 3 percent. The solution to this problem will not be found in management by fire.*

Response: Western white pine has declined 95 percent from historical to current periods because of timber harvest, wildfire suppression and white pine blister rust. In the Butte, Upper Columbia/Salmon Clearwater, and Eastern Washington Resource Advisory Council areas, loss of western white pine has had a tremendous impact on the ecology of forest ecosystems, disturbance regimes and wildlife species that use those habitats. The interior Columbia River Basin Ecosystem Management Project direction intends to increase the geographic extent of western white pine in these areas and to continue to plant blister-rust-resistant stock and reduce competition to increase the abundance, genetic diversity, and distribution of these species. Multiple methods for increasing the extent of western white pine would be used including: selecting and testing new candidate rust-resistant trees, and judiciously using lower levels of rust-resistant trees; reducing mortality of infected pine through pruning and canker excision; minimizing selection pressure on fungus by conservative use of highly rust-resistant pine stock; monitoring for new races of rust; reducing competition and promoting more open stands which are less conducive to rush and spread; and protecting existing stands.

Comment: *The depletion of the genetic resource present in our native tree species is not addressed in the summary of the Supplemental Draft EIS.*

Response: Although a discussion of genetics is not included in the summary, it is addressed in the Supplemental Draft EIS. The management direction includes guidelines that recommend using natural regeneration where possible in order to maintain the genetic qualities that have been adapted to a climate and site over thousands of years.

Stewardship Harvest

Comment: *Explain why logging is now referred to as stewardship harvest.*

Response: Stewardship harvest is a term that came from the Forest Service annual timber harvest report. The primary objective of stewardship harvests is ecosystem health. Stewardship harvests primarily thin smaller diameter trees to promote forest health, as opposed to removing all trees in an area to realize economic objectives.

Comment: *Recent research shows that thinning mature forests can result in an increase in diversity and abundance*

of bark beetles (Hindmarch & Reed, unpublished). This information is not disclosed or considered.

Response: The Assessment of Ecosystem Components includes a comprehensive discussion of the disturbance ecology of the Interior Columbia River Basin, including the effects of pathogens and insects and their interactions with management activities, based on literature available at that time (see pages 387+ and 401). The Supplemental Draft EIS landscape effects evaluation (based on Hemstrom et al. 2000) includes discussions about insect and disease activity and the likely effects of treatments. Estimated effects are based on a voluminous published literature and models that incorporated expert subject matter opinion on the interactions of thinning and insect activity. New scientific literature and research will appear and will be used in future applications of the final EIS direction. Unpublished literature is difficult to use because it is often not generally available and may not have been subject to documented scientific peer review.

Comment: *The 21 percent increase in logging levels will put aquatic species at further risk by increasing the level of ground-disturbing activities in watersheds containing critical habitat. Logging would also put wide-ranging terrestrial species at greater risk by further fragmenting habitat. It would be preferable to create a plan with less logging if the goal is to recover and de-list species.*

Response: The objective of the stewardship harvesting proposed in the management direction is to promote forest health. Through thinning and the use of prescribed fire, the management direction is intended to reduce forest fuels, allow fire to be reintroduced, provide habitat for wildlife species, and reduce the threat of wildfire. Where possible, this forest restoration will also provide goods and services to local communities. The primary objective of restoration activities is ecosystem health.

Management direction specifically addresses fish and wildlife habitats that are at risk (for example old forests and riparian areas) and outlines specific direction for threatened and endangered wildlife species. This direction, in conjunction with the step-down processes of Subbasin Review, Ecosystem Analysis at the Watershed Scale, and project level analysis will promote broad-scale ecosystem health objectives while also addressing the localized needs of fish and wildlife species.

According to the effects analysis conducted by the Science Advisory Group (Hemstrom et al. 2000), habitat for fish and many wildlife species would improve under the proposed decision. There is also an anticipated decrease in soil degradation and an increase in the extent of old forests.

Comment: *The plan does not recognize the negative impact of road construction and mechanical timber harvest associated with increased commercial "restoration" logging.*

Response: Restoration is intended to benefit aquatic and terrestrial species, forest health, rangeland health, and watershed health in an integrated manner. For example, when conducting forest restoration, the existing road network will be also addressed. The intent is to identify restoration needs for subbasins and watersheds and determine the most appropriate activities needed in the area and the appropriate timing and location of these activities. The mechanism for setting these priorities includes: Subbasin Review, Ecosystem Analysis at the Watershed Scale, and Roads Analysis. Roads Analysis would systematically and hierarchically evaluate existing road system needs and establish priorities for road restoration and closure.

Guideline R-G3 promotes using the existing road network for access to do restoration activities before removing roads in watersheds where vegetation restoration is a priority. The overall intent of the roads direction is to reduce road-related adverse effects through a variety of techniques including obliteration, closures, and road improvements and to progress, in a staged approach, toward a smaller transportation system that can be effectively and efficiently maintained into the future with minimal environmental impact.

The intent is not to increase the road network to conduct restoration. The intent is to restore areas where there is the greatest opportunity for success and the ability to conduct the restoration in a cost effective manner. While not prohibited, it is unlikely that new roads would be created to conduct restoration work. In the event that the analysis processes indicates that restoration should occur in an area where there would be a need to build a road, the proposed action would have to comply with the Final EIS Objectives and Standards, the Endangered Species Act, and the Clean Water Act and it would also be subject to NEPA analysis.

Comment: *The Supplemental Draft EIS should emphasize and promote active management to promote forest health. The management direction limits opportunities to combine commercial harvest with restoration.*

Response: The management direction promotes the use of prescribed fire and stewardship harvests to promote forest health. There is an estimated 21 percent increase in harvest levels. The objective of these stewardship harvests is to reduce fuel loads, improve stand vigor, promote wildlife habitat, and reduce the threat of wildfire. Where possible, these stewardship harvests would provide economic benefit to local communities.

Comment: *Under Alternative S2, timber harvest levels in all Resource Advisory Councils and Provincial Advisory Committees are expected to increase except in the Eastern Washington Resource Advisory Council area. The Colville National Forest has an overabundance of small diameter, overstocked stands and industrial capability in place to conduct restoration activities in these stands. Why then is the timber harvest levels projected to be lower in this area?*

Response: The stewardship harvest levels are estimated to be lower in the Eastern Washington Resource Advisory Council area because much of the large volume has already been removed from the Colville National Forest and other national forests in the area, leaving only very small trees to be thinned. This results in a smaller volume of timber harvest.

Mature and Old Forest Management

Comment: *The plan does not include substantive protections for vanishing old forest ecosystems and is, therefore, unacceptable as a replacement for Eastside Screens. The agencies acknowledge that old ponderosa pine, western larch and western white pine forests are disappearing, but cutting is allowed in 7/8 of these older forests.*

Response: The management direction promotes an integrated strategy for short-term protection as well as long-term expansion of old forests in the interior Columbia River Basin. The intent of the management direction is to maintain dry and moist old forests of all types; it avoids the diameter limits outlined in the interim Eastside Screens because tree size is diverse across the basin. The size of large trees needed to make up an old forest depends on the species, site, region, and other factors. Snags, downed wood,

decadent trees, and patchy openings are old-forest characteristics which also need protection and maintenance; the management direction also provides strategies for promoting these characteristics.

Insects, disease, and stand-replacing wildfire are all long-term risks to old forests that can be addressed through management activities such as thinning and the use of prescribed fire. Thinning may be needed in the warm dry forests, and to a lesser extent in the moist forest, where the tree densities have increased beyond the long-term carrying capacity of the area. Thinning from below can maintain stand vigor, remove ladder fuels, and allow fire to be put back into the ecosystem without destroying the old forest and without harming the old-forest characteristics.

Even old forests in the low to mid elevations historically saw periodic disturbance (wildfire) which maintained the big trees. Without some periodic disturbance, stresses eventually culminate in episodes of insects and/or disease. The interior Columbia River Basin Ecosystem Management Project direction lays out a strategy which not only protects old forests from management activities in the short term, but also aims to achieve expansion of the old forests types that have declined in the long term.

Comment: *The greatest shortcomings of the T watershed guidance arise from the limited geographic distribution of T watersheds, which overlap heavily with forested wilderness. As such, T watersheds do not constitute a sufficiently large area of habitat needed to facilitate a significant increase in environmental indices that would ultimately lead to overall improvement in population outcomes for most species of concern. The role of T watersheds should be to serve as anchors for a landscape-scale terrestrial conservation strategy.*

Response: T watersheds contain source habitats that are relatively similar in pattern across the landscape compared with historical vegetation patterns and represent the best remaining habitats for the five terrestrial wildlife families that have declined since historic times. There are approximately 14.3 million acres of T watersheds, 4.8 million of which are outside designated wilderness and 9.5 million acres of which are within designated wilderness. The intent of T watershed direction is to maintain and secure these areas that are in short supply and increase the extent and connectivity of these source habitats over the long-term. However, T watersheds alone do not constitute a network of habitats for terrestrial species.

They are one piece of the overall strategy to maintain and restore networks of habitat for terrestrial species. Base level direction and restoration direction are also designed to promote the health and resiliency of wildlife habitats across the basin.

Comment: *Helicopter logging is a poor alternative to building logging roads into roadless areas. Not only are helicopters very expensive to operate, helicopter logging can also contribute sediment to streams. Megahan (1987) found that sediment delivery from logging and prescribed burning where 75 foot buffers were provided. Helicopter logging also fragments the forest landscape, dries out the soil, and destroys important wildlife habitat.*

Response: The Supplemental Draft EIS does not specify the management techniques that managers should use to accomplish the management objectives outlined in the strategy. These decisions would be made at the local level, informed by analysis processes and management direction in the Supplemental Draft EIS. Local actions will also comply with the National Environmental Policy Act, which provides the public with the opportunity to review and comment on the proposed action.

Rangeland Health and Management

Rangeland Restoration

Comment: *The full level and extent of restoration required to generate a basin-wide shift in population outcomes of rangeland habitat dependent species should be fully defined and the tradeoffs fully explored. An effort should be made to determine whether emphasizing a different specific set of rangeland subbasins would improve outcomes and still be within an acceptable cost range. Placing more emphasis and management direction for improvement of rangeland habitats should be adopted and incorporated into Alternative S2. You should just get more money to restore these lands.*

Response: The Supplemental Draft EIS recognizes that the rates and types of restoration activities will increase with additional funding, but the overall strategy is not directly budget sensitive. The direction is proposed to be accomplished at whatever the funding level is determined to be (See Chapter 4, Analysis of Implementation Costs and Outputs section).

For the Final EIS, the Scientific Advisory Group (SAG) sensitivity analyses found that an additional

investment of 20 to 39 million dollars and reducing adverse livestock grazing effects could make a difference in the projected species environmental outcomes on Forest Service- and BLM-administered lands. The SAG further concluded through these analyses that the two variables, investment in restoration and reduction in adverse livestock grazing effects, are intertwined and would not be successful in influencing outcomes without concomitant application of both. Additional investment in restoration contributes to slowing the decline of rangeland habitats only if it is accompanied by livestock management that reduces the adverse effects of livestock grazing. Conversely, changes in livestock management that reduces adverse effects must be accompanied by investment in restoration to be effective in slowing habitat declines.

Comment: *We are concerned about the predicted continued decline of grassland ecosystems and what seems to be little attention or priority given to them especially those areas not identified as a restoration priority.*

Response: Rangeland source habitats that have declined substantially from historical to current periods are targeted for restoration emphasis in the Final EIS. In addition, there is substantial base-level and restoration direction in the Final EIS that focuses on sustaining rangeland habitats. Specifically, the rationale statement for Objective R-O2 addresses restoration of the dry grass potential vegetation group. Restoration direction applies wherever restoration activities are planned to occur, not only in high priority to restore subbasins. Some areas were not identified as high priority subbasins because of their high costs and low success (opportunity) for rehabilitation.

Comment: *The plan does nothing to protect the rapidly disappearing shrub-steppe habitat. This vegetation type has declined 80 percent and management needs to take drastic steps to protect it. The causes of the increased fragmentation and loss of connectivity within and between blocks of habitat have not been honestly discussed.*

Response: Direction in the Final EIS emphasizes the restoration, management, and maintenance of shrub-steppe habitat. Objectives B-O32 and B-O33 discuss managing and maintaining this vegetation type to meet the habitat needs of Terrestrial Families 11 and 12. Objectives R-O2 and R-O10 provide direction for the restoration of shrub-steppe habitat. The causes of fragmentation and loss of connectivity are

discussed in the *Scientific Assessment*, and the direction is focused on addressing these issues.

Comment: *In the Supplemental Draft EIS it appears that the majority of the restoration efforts will be in forested watersheds. More rangeland identified for restoration would receive a great deal of support. The arid lands do not receive priority because techniques for restoration are not well developed.*

Response: The proposed decision includes integrated management direction that stresses the interconnections between the components of landscape dynamics, terrestrial source habitats, aquatic species, riparian and hydrologic processes, social-economics, and tribal governments. The intent of broad-scale high restoration priority subbasins is to concentrate restoration efforts to make these activities more efficient and effective. These subbasins were identified based on risk to aquatic and terrestrial species and their habitat, opportunities to reduce those risks, and other criteria described in the Supplemental Draft EIS, Chapter 3, pages 92-93. Identifying more rangeland subbasins for restoration would require increases in funding to restore these lands.

Livestock Grazing Effects

Comment: *We are concerned about livestock grazing and changes in the rangeland ecosystem such as soil disturbance, reduced cover of biological crusts, weed invasions, conifer encroachment, and changing fire frequencies.*

The Supplemental Draft EIS lacked discussion of the benefits of livestock grazing to the entire environment or the environmental impact if grazing were eliminated or limited in the project area.

Response: The proposed decision includes direction related to management of livestock grazing, soil disturbance, biological crusts, weed invasions, conifer encroachment and changing fire frequencies. These activities and their effects are discussed in Chapters 2 and 4 of the Supplemental Draft and Final EISs.

Comment: *A 10 percent reduction in Animal Unit Months (AUMs) is insufficient to achieve the goal of recovering damaged ecosystems.*

Response: The intent of direction in the proposed decision is to restore sustainable vegetation conditions and habitat. The Science Advisory Group estimates that a 10 percent reduction in Animal Unit

Months would result from long-term implementation of the direction, but no specific reduction is being proposed. The allocation of Animal Unit Months of forage for livestock will be made by local administrative units at the individual land use plan or activity plan level, using fire-scale, local data and conditions.

Comment: *There is a discrepancy between the information presented in Map 2-36 and in the BLM publication "Public Land Statistics 1999." The BLM data show 65-75 percent of rangelands are in fair condition where as ICBEMP says 65-70 percent have low ecological integrity.*

Response: The two documents have different purposes and different terminology. These are two different measures of rangeland attributes, and they are not mutually exclusive. The condition rating relates to the current status of the lands, while ecological integrity relates to the overall sustainability of the lands.

Comment: *The greatest degradation of arid lands occurs as a result of livestock grazing during periods of drought. This issue is not addressed in the Supplemental Draft EIS for management purposes.*

Response: In the Supplemental Draft EIS, Chapter 3, page 57, Guideline B-G15 specifically addresses management of grazing practices to be considered during periods of drought. The implications of grazing during drought periods are disclosed in the Supplemental Draft EIS in Chapter 2, page 242.

Comment: *Bunchgrasses did not evolve under heavy grazing pressure from large herbivores and are very sensitive to grazing. This issue is not addressed in the Supplemental Draft EIS for management purposes. None of the alternatives are adequate for restoration of the grassland communities to the point where they would support historical populations of grassland species.*

Response: The Final EIS direction emphasizes restoration of grassland vegetation types including bunchgrasses. Changes in historical to current grazing patterns are disclosed in the Supplemental Draft EIS (Chapter 2, pages 236-242). Objective B-O33 provides direction for management of habitat for Terrestrial Family 12, (grassland species). Objective R-O2 addresses the dry grass potential vegetation group, which includes grasslands. Objective R-O21 specifically addresses restoration of rangeland composition and structure for terrestrial source habitat.

Comment: *It is important to identify areas that are unsuitable for livestock grazing and to protect them with a management standard. These areas are unsuitable because they may have never been grazed, or they may be riparian areas; habitat for threatened, endangered, or sensitive species; or large blocks where natural succession can be observed. Use of the term "suitable" may result in prompting the question of "what standards are you using to determine suitability for livestock grazing"?*

Response: Determining areas "suitable" or "unsuitable" for livestock grazing requires fine-scale data that is not available at the basin level. Final EIS direction sets outcomes to be achieved. How these outcomes will be achieved depends on fine-scale conditions and analysis.

Rangeland Vegetation Composition and Structure

Comment: The objective for rangeland seeding should include something about meeting the designated land and resource objectives for any particular piece of land; for example, crested wheat may meet the objective of B-O35 yet be deficient in meeting the overall intent.

Response: Objective B-035 was combined with B-034 in the Final EIS. The rationale statement was clarified. Rationales are intended to be used in conjunction with the objective to ensure that the intent of the objective is achieved.

Comment: *The Supplemental Draft EIS acknowledges that ecological interrelationships are complex and difficult to specifically identify, yet Chapter 3, page 117, of the Supplemental Draft EIS states (incorrectly) that juniper expansion can be caused solely because of change in climate and that expansion may be separated from other ecological causes.*

Response: Chapter 3, Page 117, of the Supplemental Draft EIS states that the increase in juniper density is attributable to a fire suppression and excessive livestock grazing either singly or in combination.

Biological Crusts

Comment: *How can grazing be compatible with biological soil crusts?*

Response: Management direction in Chapter 3 of the Supplemental Draft EIS (Objectives B-O9, B-

O10, R-O11, and Guideline B-G15,)), requires that land uses such as livestock grazing should provide for adequate cover of biological crusts (for example, by assuring that soil stability is maintained). The rangelands direction the Forest Service and BLM would implement as a result of the Interior Columbia Basin Ecosystem Management Project decision specifically addresses grazing management and maintenance of biological soil crusts, as it relates to cover. Generally, grazing during times of wet conditions such as spring or winter is compatible with maintaining soil crusts.

Comment: *The Supplemental Draft EIS provides no standards to prevent loss of biological crusts and does not provide a full discussion on the benefits of crusts to soil stabilization and prevention of weed seed germination. There is also no discussion of the internal ICBEMP research on crusts; this is region-specific research and discusses the known benefits of crusts.*

Response: The proposed decision includes Objective R-O-11 (manage to allow restoration of crusts where the development of crust potential is high), Objective B-O-9 (manage vegetation to maintain crusts), and Objective B-O10 (provide adequate crust cover to allow functions and processes of arid lands ecosystems). Effects on biological crusts are disclosed in the Supplemental Draft EIS in Chapter 2, pages 96-97, and in Chapter 4, pages 77-79.

Noxious Weeds

Comment: *The Supplemental Draft EIS attributes the current weed situation to grazing pressures placed on rangelands in the late 1800s and early 1900s. Yet the EIS describes weeds spreading at an exponential rate today. This is due primarily to livestock grazing that is occurring today.*

Response: Chapter 2 of the Supplemental Draft EIS (pages 242-251) discusses historical and current factors related to noxious weed invasion and expansion. Final EIS direction includes management of livestock to achieve objectives. The exponential rate of noxious weed infestation is expected to continue with or without livestock grazing.

Comment: *There should be stronger language for prevention and control of noxious weeds. Suggestions range from ignoring cheat grass because it is so wide spread, to limiting or stopping all management activities that allow soil disturbance. The role of disturbance in*

ungrazed systems and its relation to invasion of noxious weeds is an issue.

Response: Direction in the Final EIS emphasizes the need for prevention and control of noxious weeds through the use of integrated weed management and other tools. It is recognized that restoring cheatgrass-dominated sites will be extremely difficult. However, there is greater opportunity to limit the spread of cheatgrass and prevent the loss of native habitats. If cheatgrass is ignored then there is less opportunity to prevent the continued loss of habitat for rangeland species. Specifically, Guideline B-G18 of the Supplemental Draft EIS focuses on prevention of invasion of new invaders by minimizing soil disturbance.

Comment: *Given the vast extent of weeds across the basin in both rangeland and forested ecosystems, there is a need for prioritization of treatment. More priority should be placed on the forested ecosystems or threatened, endangered, or proposed aquatic species habitat or when the weeds first appear than is currently emphasized in the Supplemental Draft EIS.*

Response: Part of base-level direction for threatened, endangered, or proposed species establishes a hierarchy of direction so that management of these species takes priority. Additional information on the management intent is found in the Supplemental Draft EIS Chapter 3, pages 84-85 as it relates to assessing risks and opportunities for these species. Other standards include B-S14, management of A1/A2 subwatersheds and terrestrial source habitats in T watersheds, which are given the highest broad-scale priority.

Comment: *An appropriate management strategy would be to identify weed-free areas and maintain this status as a managed priority.*

Response: Objective B-O11 deals with maintenance of weed-free plant communities.

Comment: *A full range of opinions was expressed on the issue of using herbicides to control noxious weeds. Some feel that stronger or more specific language is needed in the Record of Decision to direct land managers to use the full array of weed management tools, including herbicides, to aggressively tackle the invasion. Other comments suggest that the use of chemicals would do more harm than good.*

Response: Management direction for noxious weeds is addressed in Objective B-O11; Standards B-S13,

14, and 15; and Guidelines B-G18 to 26. Managers thus would have a full range of options. Specifically, Objective B-O11 and Standard B-S13 require use of an integrated weed management strategy which could include the use of chemical options. The specific techniques used would depend on fine-scale circumstances. Given the magnitude of the problem and the rates of growth of noxious weeds infestations, it is doubtful that reduction in the area of noxious weeds could be achieved without the use of herbicides.

Comment: *How is the expected increase in timber harvest and road-building activities going to achieve the objective of eradicating or preventing the spread of noxious weeds in native plant communities?*

Response: Integrated weed management strategies should address all aspects contributing to the spread of noxious weeds. Direction in the Final EIS should lead to a reduction in total road miles, over time.

Comment: *Seeding to control erosion or prevent the introduction of exotic species should only be done with native species or sterile plants that are later replaced by native plants.*

Response: Alternative S2 direction is to favor use of native plants. Guideline R-G5 and Standard R-S1 provide direction regarding use of native seed. In some dry areas, such as salt desert shrub, seeding native plants has not been successful. However, perennial exotic species, such as crested wheatgrass, have had some success in being established in low precipitation areas. If the only choice to eliminate cheatgrass or medusa head and to reduce fire frequency is to plant exotic perennials, then this tool is intended to be available to the land manager.

Rare Plants

Comment: *What are "rare plant communities?" Provide a summary of what plant communities have been identified as rare or unique.*

Response: Rare plant communities, as identified in the *Scientific Assessment*, are plant communities that have been identified in consultation with State Natural Heritage Programs and Conservation Data Centers, based on the work of Bourgeron and Engelking (1994). These are communities (including potential vegetation types, community types, and plant associations) that are defined as globally rare and either critically imperiled and vulnerable to

extinction or very rare and restricted in range. They may be inherently rare because of a unique set of abiotic features, or they may once have been common but are now reduced because of management or land use changes. For example, the Palouse grasslands have been reduced to a few remnant stands because of agricultural land conversions.

Aquatic - Riparian - Hydrologic Health and Management

Aquatic - Riparian - Hydrologic Strategies

Comment: *The preferred alternative lacks clear management direction to replace the interim aquatic strategies. The final alternative should offer equivalent or greater protection than the interim strategies. Modifications were made to the Riparian Conservation Area management objectives and standards to provide greater clarity. The Record of Decision will describe how the agencies will transition from the interim aquatic strategies to the selected alternative.*

Response: The analysis of effects for the three alternatives in the Supplemental Draft EIS showed that the preferred alternative is expected to be more effective, in the long term, at maintaining or improving aquatic habitat capacity, water quality, and riparian ecological processes than continuation of the current interim aquatic direction. Application of the hierarchical step-down analysis requirements in the preferred alternative (as described in Chapter 3, pages 40-49, of the Supplemental Draft EIS) is also expected to more adequately incorporate hydrologic function and watershed process considerations into decision-making than the current interim direction.

Comment: *A detailed comparison between the interim aquatic strategies and the aquatic component of the proposed decision should be provided in the Final EIS.*

Response: Chapter 3 of the Supplemental Draft EIS and Final EIS contains the management direction for both the interim aquatic strategies and the selected alternative. A separate comparative analysis cross-walk was prepared and will be included in the project Administrative Record after the Record of Decision.

Comment: *Greater clarity should be provided in the Final EIS about the process to validate A1/A2 designations and*

the relation between Riparian Conservation Areas, sediment delivery areas, and Watershed Condition Indicators.

Response: Between the release of the Supplemental Draft EIS and the Final EIS, field units within the planning area updated the widely distributed salmonid status information. The intent to update this information was disclosed in the Supplemental Draft EIS. The project used this information in delineating the A1/A2 subwatersheds in the Final EIS. Appendix 18 included in the Final EIS, describes the process for modifying the A1/A2 subwatersheds after the Record of Decision.

Comment: *The phrase "maintain or improve" as used in the aquatic/riparian/hydrologic objectives is vague and open to varying interpretation. Greater clarity should be provided in the Final EIS.*

Response: Greater clarity has been provided for this phrase as used in management objectives for Riparian Conservation Area management and A1/A2 subwatersheds in Chapter 3 of the Final EIS.

Comment: *The phrase "maintain or improve" as used in the aquatic/riparian/hydrologic objectives is vague and open to varying interpretation. Greater clarity should be provided in the Final EIS.*

Response: Greater clarity has been provided for this phrase as used in management objectives for Riparian Conservation Area management and A1/A2 subwatersheds in Chapter 3 of the Final EIS.

Comment: *Special emphasis and priority watersheds identified in the Biological Opinions receive less protection in the preferred alternative. Greater protection should be provided to these areas. Many elements of the preferred alternative work together to create a system of protection that is expected to be equal to or greater than that contained in the three existing Biological Opinions.*

Response: Many elements of the preferred alternative work together to create a system of protection that is expected to be equal to or greater than that contained in the three existing Biological Opinions. Examples of these elements include: application of the standards, guidelines and objectives; the system of A1/A2 subwatersheds; and high restoration priority subbasins. Until Watershed Condition Indicators are implemented, the interim use of the U.S. Fish and Wildlife Service Matrix of Diagnostics/Pathways and

Indicators and the National Marine Fisheries Service Matrix of Pathways and Indicators will also provide assurances. The Biological Opinion for the ICBEMP Record of Decision will replace the three existing Biological Opinions; and Endangered Species Act consultation will help determine what, if any, additional elements of the existing Biological Opinions are incorporated into the Record of Decision.

Comment: *The preferred alternative did not identify quantitative and accountable fish habitat and water quality objectives that are based on the biological needs of salmon.*

Response: The preferred alternative directs the federal agencies to develop an integrated suite of qualitative and quantitative aquatic, riparian, and hydrologic condition measures (WCIs) to help monitor and protect the health of a variety of aquatic- and riparian-dependent species. Until WCIs have been developed and implemented, a modified matrix has been developed to assist field units in determining the consistency of their activities with aquatic, riparian, and hydrologic standards and objectives in the Record of Decision. (See Final EIS, Appendix 9 for more information about this matrix). The modified matrix is a multi-scale diagnostic tool that will evaluate site-level projects in the context of conditions at the subwatershed or watershed scale. However, this diagnostic tool cannot be used alone to make Endangered Species Act determinations.

The modified matrix is a compilation of the existing U.S. Fish and Wildlife Service (USFWS) Matrix of Diagnostics/Pathways and Indicators and the National Marine Fisheries Service (NMFS) Matrix of Pathways and Indicators. The modified matrix was developed by a task team composed of regulatory and land management technical specialists working under the Interagency Implementation Team (IIT) established to streamline implementation of PACFISH, INFISH, and the Northwest Forest Plan (see Appendix 9 of the Final EIS for more information). The WCIs and the modified matrix are both considered to be accountable and quantitative objectives that, when combined with other direction in the proposed decision, are intended to address the needs of salmon and other aquatic species at risk at a basin-wide scale.

Comment: *The preferred alternative should be revised to be consistent with the Wy-Kan-Ush-Mi Wa-Kish-Wit aquatic conservation and restoration strategy developed by the Columbia River Intertribal Fish Commission.*

Response: The EIS Team worked with the Tribal Liaison Group and a Tribal/Executive Screening Committee Working Group (see side bar discussion, in Chapter 4, page 4-175 of the Supplemental Draft EIS) to collaborate with 22 tribal governments in the project area and to resolve tribally identified basin-wide issues. The Columbia River Tribes' salmon restoration plan was considered during development of the preferred alternative through the involvement of these collaborative groups. Many of the principles and objectives for management of resources and associated species contained in the proposed decision are consistent with the Wy-Kan-Ush-Mi Wa-Kish-Wit strategy, and were included in ICBEMP direction.

Aquatic and Riparian Processes and Management

Comment: *Standard B-S42 (sediment delivery influence area) is harder to apply on rangelands than on forested areas because of different topography and land uses.*

Response: The steepness of adjacent side slopes as well as certain soil characteristics (such as surface texture) and ground cover can influence sediment delivery. To implement Standard B-S42, field units can use either the relationship displayed in Figure 1, Appendix 9, of the Supplemental Draft EIS (which focuses on slope steepness), or locally developed sediment delivery relationships to identify the sediment delivery influence area. Language has been added to the standard to highlight this point. It is expected that field units will develop and use appropriate sediment delivery relationships when applying this standard in rangelands. The *Assessment of Ecosystem Components* has additional information about sediment delivery relationships (Quigley and Arbelbide 1997).

Comment: Some commentors feel that management direction for Riparian Conservation Areas does not contain enough specifics to prevent degradation to riparian areas from uses such as livestock grazing, while others feel that the management direction is overly restrictive and adverse impacts would occur to uses such as recreation.

Response: The Riparian Conservation Area management direction requires existing land uses, facilities, and actions (including livestock grazing and recreation) within or affecting Riparian Conservation Areas to be modified, discontinued, or relocated (subject to existing rights) if they are adversely

affecting elements that are critical to the function of riparian systems. Because the Riparian Conservation Area objectives and standards in the Final EIS are designed to be most appropriate at a watershed or broad scale, not at the fine scale, specific prescriptive measures needed to address adverse impacts must be developed through application of the step-down analysis and through local-level National Environmental Policy Act analysis. This approach allows the broad direction in the Final EIS to be applied on a site-specific basis.

Comment: *Management direction related to fire retardants (Standard B-S38) is not workable because aerial applications can't be controlled so precisely.*

Response: This standard has been modified in the Final EIS to direct that delivery of chemical retardant, foam, etc., to surface waters be avoided (rather than prohibited). In most situations, application of fire retardants can be conducted in a manner that avoids delivery to surface waters.

Comment: *Some commentors believe that Riparian Conservation Areas (RCAs) should be removed from the suitable timber base. Others are concerned about the economic and ecological impacts of removing Riparian Conservation Areas from the suitable timber base.*

Response: Timber production estimates in the Final EIS were based on assumptions about the magnitude of timber harvest resulting from implementation of broad-scale restoration-related goals and objectives. These estimates will be refined by each national forest and BLM district when they adjust their land use plans to conform with the Record of Decision. RCAs should not be included in the suitable timber base used to calculate allowable sale quantity because RCA delineations are not prescribed distances; rather, they will vary based on ecological and geomorphic factors. Also, the level of timber harvest occurring in Riparian Conservation Areas is expected to be highly variable. Much of the timber that may be removed from RCAs is expected to be small-diameter trees that are usually not economical to harvest using the low-impact methods which would be used in these areas. These factors, among others, make inclusion of RCAs in models of timber production inappropriate.

Comment: *The Supplemental Draft EIS did not properly interpret or apply Proper Functioning Condition.*

Response: Proper Functioning Condition (PFC) is the minimum threshold for management of riparian-wetland areas. PFC provides the physical and ecological foundation for the health of these systems. Once PFC is achieved, the methodology assumes that vegetation community succession beyond PFC will occur to achieve a desired plant community. Individual BLM and Forest Service administrative units develop specific riparian-wetland objectives to supplement this baseline requirement. It is not within the scope of this EIS to examine whether PFC is being properly applied at the field level; instead, the results of PFC evaluations are presented and used in the Final EIS as part of a larger suite of information.

Comment: *The Supplemental Draft EIS Alternatives S2 and S3 contain no measurable standards to maintain/restore fish habitat. There is no monitoring plan included in any of the alternatives. What are the Riparian Conservation Area management objectives and how are they measured? Without standards or monitoring it is impossible to determine the condition of a watershed or evaluate the impacts of activities conducted in it.*

Response: The preferred alternative directs the federal agencies to develop an integrated suite of qualitative and quantitative aquatic, riparian, and hydrologic condition measures (WCIs) to help monitor and protect the health of a variety of aquatic- and riparian-dependent species. Until WCIs have been developed and implemented, a modified matrix has been developed to assist field units in determining the consistency of their activities with aquatic, riparian, and hydrologic standards and objectives in the Record of Decision. (See Final EIS, Appendix 9, for more information about this matrix). The modified matrix is a multi-scale diagnostic tool that will evaluate site-level projects in the context of conditions at the subwatershed or watershed scale.

The modified matrix was developed by a task team composed of regulatory and land management technical specialists working under the Interagency Implementation Team (IIT) established to streamline implementation of PACFISH, INFISH, and the Northwest Forest Plan (see Appendix 9 of the Final EIS for more information). The WCIs and the modified matrix are both considered to be accountable and quantitative objectives that, when combined with other standards, objectives, and guidelines in the proposed decision, are intended to address the needs of salmon and other aquatic species at risk at a basin-wide scale.

RCA Management

Comment: *It is difficult to follow or translate Riparian Conservation Area (RCA) direction. Please clarify the direction for changing or delineating RCA widths. The RCA delineation concept contains insufficient detail in the Supplemental Draft EIS about criteria, factors, scale, and other key information about the process. Please provide better definition and assurance that RCA boundary adjustments will be scientifically sound and complete.*

Response: The discussion of Riparian Conservation Area delineation has been clarified in the Final EIS. During Ecosystem Analysis at the Watershed Scale or through appropriate planning processes, interim RCA criteria would be replaced with ecologically appropriate criteria. The rationale for final RCA delineation criteria will be presented through the appropriate National Environmental Policy Act decision-making process for local projects, after interagency and intra-governmental collaboration occurs. On-the-ground delineation of RCAs would be conducted by land managers with the expertise or training that enables them to identify riparian functions and processes and correctly apply them to local site conditions.

Comment: *The delineation of and process for changing Riparian Conservation Areas provides less protection for streams and aquatic habitats than is needed. The Final EIS definition of Riparian Conservation Area must include a minimum of 300 feet on perennial streams.*

Response: To be effective, Riparian Conservation Area delineation must adjust for widely variable ecological and geomorphic site characteristics that exist throughout the project area. Through analysis, the EIS Team determined that prescribing a specific Riparian Conservation Area width value was not appropriate. Instead, the Riparian Conservation Area direction focuses on outcomes that maintain or restore natural riparian and wetland structure and function. This approach, when applied through the step-down process, is considered the best way to apply the broad-scale information and objectives in the preferred alternative to on-the-ground conditions.

Watershed Condition Indicators

Comment: *The EIS should include more information about the basic purpose, design, and application of Watershed Condition Indicators (WCI). Until this information is provided, the effects of the preferred alternative cannot be fully understood. The WCIs should*

be promptly developed and a process identified for making the transition from the use of Riparian Management Objectives to WCIs.

Response: The Supplemental Draft EIS presumed that WCIs would be developed within two to three years after the signing of the Record of Decision. However, since the Supplemental Draft EIS was issued it became apparent that additional information is needed to support the development, application, and use of the WCIs. To address these needs, the EIS Team prepared an Action Plan which was reviewed by a team of technical specialists representing each of the Interagency Executives. This Action Plan: (1) identifies a single suite of indicators; (2) develops methods to determine the ranges of values for the indicators and guidelines for applying values in project planning; and (3) assigns ranges of values to indicators while considering subregional variation. The requirement to apply WCIs would come into effect after the WCI strategy has been fully developed and tested.

Comment: *The Watershed Condition Indicators (WCI) should not be fixed targets. Rather, they should acknowledge the variability of habitat capabilities based upon factors such as geology and stream channel morphology, and they should be receptive to site-specific modification or adjustments.*

Response: The WCIs are based on providing a similar monitoring and evaluation strategy to ensure project consistency with Aquatic Conservation Strategy (ACS) objectives under the Northwest Forest Plan. The WCIs are linked to the aquatic, riparian, hydrologic, and riparian-associated terrestrial species management objectives. The WCIs consist of a suite of integrated indicators that represent important ecological processes that create and maintain aquatic and riparian habitat conditions. Each indicator would have value ranges (not fixed targets) defining "functioning", "functioning at risk", and "non-functioning" conditions. The single suite of indicators would be consistently applied across federally managed lands within the project area. To resolve concerns raised about the high degree of variability in the landscapes across the project area, the ranges of values for each of the indicators will initially be developed at the sub regional level, with the ability to refine the ranges of values using finer-scale data and local knowledge.

Comment: *The Watershed Condition Indicators (WCI) indicators should address terrestrial and riparian habitat elements.*

Response: A primary purpose of the WCIs is to evaluate and monitor the functionality of watersheds in the project area. To do this, values would be assigned to channel, riparian (aquatic and terrestrial), and upland (aquatic and terrestrial) indicators at subregional scales based on relationships among key natural disturbance processes and biological, physical, and chemical characteristics of subwatersheds or watersheds. To the extent that habitat elements contribute to these relationships, they would be included. In addition, one intended use of the integrated suite of WCIs is in the National Environmental Policy Act process to evaluate if management activity maintains, or leads to attainment of, the aquatic, riparian, hydrologic, and riparian-associated terrestrial species management objectives at the subwatershed or watershed scale, in the long term. If a certain indicator(s) highlights a concern, the activity would be designed to alleviate the concern, or rationale and documentation to support why the activity is needed to achieve aquatic, riparian, hydrologic, or riparian-associated terrestrial objectives would be provided.

Comment: *Development of the Watershed Condition Indicators (WCI) could result in a major workload. In addition, the information required to complete the matrix and make a determination on the condition does not currently exist on many rangelands. These two factors affect the feasibility of this direction.*

Response: The amount of additional work for field units to implement WCIs will vary. When first applying WCIs at the local level, field units would focus on assigning appropriate ranges of values for the indicators. This is necessary because the default values were determined at the subregional scale. The Action Plan (see earlier comment) would assist the implementation of WCIs by providing guidance on methods for determining the ranges of values for the indicators and on assigning ranges of values to indicators.

Comment: *The EIS should provide more direction regarding the use of Watershed Condition Indicators (WCI) during application of the step-down process and in decision making and risk management. The PACFISH*

and INFISH strategies reduced risk to sensitive species by avoiding degradation of measured habitat indicators and using risk-adverse standards for management activities.

Response: Measurable indicators (in the short term, the matrices, and eventually WCIs) in combination with management direction will be the tool used in National Environmental Policy Act (NEPA) analysis and decision making to address the link between proposed actions and the desired outcomes articulated in the EIS. The WCIs, in combination with other assessments and cumulative effects analyses—including NEPA, Ecosystem Analysis at the Watershed Scale, and Subbasin Review—would be used to determine if proposed activities are consistent with and/or contribute toward achievement of the aquatic, riparian, and hydrologic objectives in the Record of Decision.

Comment: *The project is proposing interim use of the U.S. Fish and Wildlife Service Matrix of Diagnostics/Pathways and Indicators and the National Marine Fisheries Service Matrix of Pathways and Indicators (matrices) until Watershed Condition Indicators (WCI's) are implemented. These matrices have been useful tools in evaluating and designing federal actions to meet minimum consultation requirements (such as, assisting in determinations of jeopardy and "take" of species). Please clarify how these matrices and related guidance will be applied. Specifically, how will "refinement" of the matrices be accomplished? Will there be interagency collaboration on their refinement and application?*

Response: Until WCIs have been developed and implemented, a modified matrix has been developed to be used to assist field units in determining the consistency of their activities with aquatic, riparian, and hydrologic standards and objectives in the Record of Decision. (See the Final EIS, Appendix 9 for more information about this matrix.) The modified matrix is a multi-scale diagnostic tool that will evaluate site-level projects in the context of conditions at the subwatershed or watershed scale. However, this diagnostic tool cannot be used alone to make Endangered Species Act effect determinations.

The modified matrix is a compilation of the existing U.S. Fish and Wildlife Service Matrix of Diagnostics/Pathways and Indicators and the National Marine Fisheries Service Matrix of Pathways and Indicators. The modified matrix was developed by a task team composed of regulatory and land management

technical specialists working under the Interagency Implementation Team (IIT) established to streamline implementation of PACFISH, INFISH, and the Northwest Forest Plan.

Water Quality and Quantity

Water Quality

Comment: *Many comments were received on the water quality management direction and the Forest Service and Bureau of Land Management Protocol for Addressing Clean Water Act Section 303(d) Listed Waters (Protocol). Most comments support the use of the Protocol. Some request more information about what the Protocol is and how it will be applied. Other comments refer to non-achievable timeframes and conflicting management direction with state agencies, which have responsibility and authority for developing Total Maximum Daily Loads (TMDL). Some comments express concern about the standard requiring application of the Protocol where any land management activity has the potential to affect the parameter(s) for which the waterbody was listed.*

Response: In 1999 the Protocol was adopted by the Forest Service, the Bureau of Land Management (BLM), and the Environmental Protection Agency for use in Oregon, Washington, Idaho and Montana. Therefore, application of the Protocol to the project area is necessary and appropriate.

The Protocol acknowledges that it is a state's responsibility to develop its 303(d) lists and establish a TMDL for the parameter(s) causing waterbody impairment. The Water Quality Restoration Plans developed and implemented by the Forest Service and the BLM under the direction of the Protocol outline the specific actions by which the agencies will meet TMDL requirements on lands under their jurisdiction.

The Protocol is an iterative document and it is currently being revised to address various issues that have arisen with its implementation. The goal of addressing all impaired waterbodies on Forest Service- and BLM-administered lands within five years is one of the issues being reviewed. The agencies are committed to working collaboratively with state agencies and tribes to set priorities and timelines for addressing listed waterbodies.

The standard requiring application of the Protocol has been revised to read: "Apply the 303(d) Protocol

or an alternate analytical process agreed to by the interagency partners where any land management activity has the potential to affect the parameter(s) for which the waterbody was listed”.

Comment: *The preferred alternative does not provide adequate, enforceable standards to protect and restore water quality and aquatic resources. There are no specific time frames or standards required for restoration or recovery for water quality and aquatic resources, only objectives, which are not enforceable.*

Response: The management direction in the Final EIS is intended to result in desired broad-scale outcomes, and therefore does not prescribe site-specific standards. Application of the 303(d) Protocol or other approved hydrologic assessment methods would provide the context and direction for protecting, maintaining, and restoring water quality.

Restoration priorities for water quality have been identified within the high restoration priority subbasins, which include timeframes for completing Subbasin Review and Ecosystem Analysis at the Watershed Scale. In addition, there is management direction that requires water quality restoration activities be completed consistent with state- and tribe-established schedules.

Comment: *Although the ability of streams to support fish varies widely, this does not mean that the needs of fish are different from stream to stream or that habitat standards should be weakened. It is not acceptable to fill streams with more sediment; streams have little, if any, capacity to cope with additional sediment. We shouldn't be doing anything in the way of management activities to make things worse.*

Response: The hierarchical management direction, including the step-down analysis process, provides a process for identifying current conditions and issues with resource values, which could include sediment issues in some streams in the project area. The hierarchical analyses provide the tools to identify relationships between natural geologic processes and sediment from past management activities, and help understand the scope of existing problems and recommend possible solutions.

Comment: *The standard requiring application of the 303(d) Protocol where any land management activity has the potential to affect a listed waterbody could delay state*

applications for access across federal lands. Please clarify whether this standard requires the federal agencies or the state to complete a Water Quality Restoration Plan in order to obtain access across federal lands in a 303(d) listed watershed.

Response: Although the Protocol does provide agencies with the ability to proceed with activities in watersheds with listed streams before a Water Quality Restoration Plan is completed, the analysis of any proposed activities should address how the project(s) would influence the water quality parameters that are the cause of beneficial use impairment. Because each state may use different approaches for satisfying requirements, federal land management agencies would coordinate their activities with the appropriate state agency.

Comment: *The EIS presents erroneous conclusions regarding the major causes of temperature increases in streams. For example, the Sawtooth National Recreation Area (SNRA) has between 92 percent and 99 percent old-growth character in its forest and relatively little grazing, logging, or mining disturbance. Yet, every river leaving the SNRA is on the 303(d) list for excessive temperature.*

Response: The data, assumptions, and analyses in the EIS and supporting documents use the best available scientific information. Existing stream temperature data are quite variable and primarily fine scale. This information was assembled into a form usable at the broad scale, the resulting findings are broad in nature. Site-specific information, such as that provided in the comment, is best used in the step-down process to identify and design fine-scale management opportunities.

It is not within the scope of the project to address the validity of a state's 303(d) list. It is each state's responsibility to develop its 303(d) list and criteria for de-listing. The BLM and the Forest Service share information with states about water quality conditions on federal lands for the state's use in the listing/de-listing process.

Comment: *The Source Water Assessment Program (SWAP) provisions of the 1996 amendments to the Safe Drinking Water Act place certain obligations on federal land management agencies. Under the SWAP requirements, federal agencies that administer lands serving as source areas for drinking water supplies must collaborate*

with state and local communities to delineate and protect source water areas and inventory all potential sources of contamination. Timber harvesting, road building, weed/insect control, grazing, and recreation can affect the quality of waters that serve as drinking water supplies. More information should be included in the EIS about the BLM's and Forest Service's efforts to fulfill their responsibilities under the SWAP, and the EIS should map the location of drinking water supply watersheds in the project area.

Response: The intent of the outcome-based management direction in the preferred alternative is to restore and maintain hydrologic processes and to prevent pollution. These are fundamental steps toward ensuring that water quality on federally administered lands will support designated beneficial uses, including drinking water. The preferred alternative also directs federal land management agencies to initiate collaboration with state agencies to optimize efforts and ensure consistent approaches when addressing water quality concerns.

The legal requirements to develop water quality programs and enforce water quality standards reside with individual states, and those programs vary from state to state within the project area. The implementation of state-developed, EPA-approved water quality programs by federal land management agencies is best accomplished using Memoranda of Understanding that are collaboratively developed by all stakeholders in the area of concern. Generally, the role of the federal land management agencies is to provide technical assistance and data to states or, as appropriate, directly participate in a state's process to implement the SWAP.

Water Quantity

Comment: I'm concerned that Objective B-O8 in the preferred alternative to "sustain hydrological processes characteristic of the geoclimatic setting through management actions that resemble effects of natural disturbance processes" will be used by the federal agencies to require the owners of small hydroelectric dams to change the way they operate their projects.

Response: The management direction in the preferred alternative is based on providing desired outcomes. New management activities or current management activities subject to valid existing rights would be designed or mitigated to achieve these desired outcomes.

The mitigation and design features that may be required for individual projects will be determined at a fine-scale using the step-down process.

Comment: The Summary of Conditions and Trends in the Supplemental Draft EIS states that changes in water quantity on federally-administered lands have probably been caused by road construction and changes in vegetation due to silvicultural practices and excessive livestock grazing pressure. Yet, the EIS presents no quantitative analysis to support these assertions. Please explain what data or scientifically rigorous studies were used to support these determinations.

Response: The Scientific Assessment (Quigley and Arbelbide 1997) notes that silvicultural activities and road construction do not change the total amount or quantity of water within a watershed or drainage, but they can alter the timing and duration of peak flows. In addition, roads can increase the efficiency of water delivery directly to streams. The Forest Service recently released a comprehensive synthesis of scientific information concerning the effects of forest roads (Gucinski and Lugo 2000) which supports the information presented in the Supplemental Draft EIS.

Water Rights

Comment: The EIS should recognize hydroelectric power generation as a beneficial use of water in the project area.

Response: Beneficial uses are designated by each state and may consist of any use which may be made of water. These uses vary by state and can include (but are not limited to): domestic water supplies, industrial water supplies, agricultural water supplies, navigation, recreation in and on the water, wildlife habitat, hydroelectric power generation, and aesthetics. The list of beneficial uses included in the definitions section of Chapter 2 of the Supplemental Draft EIS is not intended to be a comprehensive list of all beneficial uses in the project area.

Comment: The EIS does not address the adverse impacts which will result from the loss of private water rights when minimum instream flows are established or grazing is eliminated. For example, the EIS should discuss the effects on wildlife when the water developments established by private ranchers are lost or no longer maintained when grazing restrictions occur.

Response: When the federal land management agencies apply for a water right from a state for the purpose of establishing and maintaining instream flows, they do so under the substantive and procedural laws of that state. Prior to making a decision on whether to grant a water right, a state determines whether any existing valid rights would be adversely affected. If so, the state can decline to issue the water right.

Throughout the project area, some wildlife populations have likely benefitted from artificial water developments. The potential effects to wildlife from the loss of artificial water developments if grazing restrictions occur should be determined through application of the step-down process and fine-scale analysis, at the local level.

Terrestrial Species

General

Comment: Please explain how the species population outcomes were derived, define the term "population" as it is used in the analysis, and explain why the bird population trend data in the Supplemental Draft EIS differs from U.S. Fish and Wildlife service information about bird population levels from 1966 through 1998.

Response: The methodology for the species population outcomes is explained in Chapter 4, page 86, of the Supplemental Draft EIS. *Source Habitats for Terrestrial Species of Focus* (Wisdom, et al. 2000) is the primary scientific underpinning to these projections. The intent was to select a set of species to represent the full array of species responses to conditions projected under the management alternatives (see Chapter 4, Page 82 of the Supplemental Draft EIS).

Comment: The Supplemental Draft EIS does not adequately protect key habitats for fish and wildlife.

Response: The Final EIS alternative provides an integrated strategy to conserve, protect, and restore fish and wildlife habitat. The application of the standards, guidelines and objectives and the system of A1/A2 subwatersheds, T watersheds, and high restoration priority subbasins are intended to provide a system of protection for key habitats. The effects analysis in the Supplemental Draft EIS concluded that, in general, the preferred alternative would result in better conditions for terrestrial vertebrate species

and for the six key salmonid fish species than the other alternatives, and would result in the largest increase in aquatic habitat capacity.

Comment: Amend the management strategy to provide strong protective standards for designated watersheds and riparian conservation areas.

Response: The Final EIS includes specific standards related to management of A1 and A2 subwatersheds, T watersheds, and Riparian Conservation Areas. These standards provide that new uses in these areas should be consistent with the management objectives, and that existing uses should maintain or improve habitat conditions. The intent of these standards and their application in Riparian Conservation Areas and A1/A2 subwatersheds is to contribute to a network of connected aquatic/riparian habitats and enhance the long-term persistence of aquatic and riparian-dependent species.

Comment: The EIS does not adequately address terrestrial invertebrates. Additional information and analysis should be presented about their ecological importance (for example, as food sources for species of concern) and their socio-economic effects (such as the damage some insects do to forest vegetation).

Response: Because the habitat requirements for invertebrates are generally at the fine scale, it is difficult to precisely establish their current condition and status or to determine the effects of broad-scale direction. Therefore, the analysis presents only a general comparison of the possible effects of the alternatives. Further analysis of effects of proposed management on terrestrial invertebrates or their habitats should be conducted on a local basis during site-specific National Environmental Policy Act analysis.

Comment: Survey and manage direction for all invertebrates and vertebrates should be included in the preferred alternative, as is required in the Northwest Forest Plan.

Response: The purpose of this project is, in part, to take a coordinated broad-scale approach to best achieve, in combination with other items, the restoration and maintenance of long-term ecosystem health and ecological integrity. The broad-scale direction in the Final EIS is intended to improve conditions for both vertebrates and invertebrates, ensuring that viability will not be adversely affected. However, specific actions will need to be addressed at

the local level through the step-down process. Mandating surveys at this broad scale is not necessary to meet the project's intent or purpose and need.

Comment: *The proposals, create a false habitat of even-aged, old-growth areas only, which are not good for wildlife.*

Response: The terrestrial strategy in the Final EIS focuses on maintaining or restoring habitats to where they would be expected to occur on the landscape. This would create a diverse mixture of habitats. In the short term, because of the limited amounts of some old forest types, there is a focus on maintaining these limited old-forest conditions where they exist. As restoration proceeds, more focus will be directed to achieving expected conditions on these sites as well.

Comment: *The Supplemental Draft EIS makes no reference to range-based species such as sage grouse. The EIS should address whether a listing of the sage grouse under the Endangered Species Act is warranted.*

Response: Sage grouse is one of the species using rangeland habitats that were analyzed in the Final EIS. Specifically, sage grouse is included in Terrestrial Family 11 (other species using rangeland habitats are included in Terrestrial Families 10 and 12). The land management agencies do not have the authority to make decisions about whether the sage grouse should be listed under the Endangered Species Act; therefore, it is outside the scope of this EIS to address this issue.

Comment: *The guideline that encourages local administrative units to develop a list of plant, animal, and fish species of concern and rare plant communities likely to occur within the unit (Guideline B-G46) should be mandatory, not optional.*

Response: The intent of Guideline B-G46 is to suggest a method for considering these resources during the step-down process. However, not all the species need to be considered in any one of the several types of step-down processes that will be conducted by administrative units. The appropriate and reasonable scope and scale of analysis will depend on the species of concern and the magnitude of risks and opportunities to affect their habitat. Therefore, the proposed decision would not require the creation of a list.

Comment: *The EIS should discuss the presence and environmental consequences of introduced birds such as*

partridges, quail, and pheasants. Appendix 4 of the Supplemental Draft EIS states that management of these species is beyond the authority of the land management agencies. Yet, based on that logic, the EIS should not address big game species either.

Response: The difference between big game species and the species of introduced birds is that the effects of the broad-scale management direction on big game species was identified as an issue. The Forest Service and BLM have limited opportunities to affect management of these introduced species.

Comment: *Only 300 of the 2,400 watersheds in the Interior Columbia River Basin will be managed for wildlife and plant species protection. The preferred alternative should protect more watersheds.*

Response: The reference to the 300 of 2,400 watersheds likely refers to T watersheds, which are only one part of the strategy in the preferred alternative to conserve and restore wildlife and plant habitats. Additional base-level and restoration direction applies to all areas of Forest Service- and BLM-administered lands in the project area, with a focus on conserving and/or restoring wildlife and plant habitats.

Comment: *The Supplemental Draft EIS did not provide specific information on the effects of the various alternatives on harvestable species, including large ungulates. For example, while the habitat capability for elk, mule deer, and white-tailed deer is expected to be maintained or slightly higher than current levels with all of the alternatives, the analysis indicates that population levels for Rocky Mountain bighorn sheep will be slightly reduced. More ungulates should be included in the terrestrial vertebrate family groups.*

Response: The effects on harvestable species are disclosed in Chapter, 4 pages 111 to 112 of the Supplemental Draft EIS. The effects on bighorn sheep are disclosed on pages 93, 96, 97, 111, and 112. The criteria for species being included in the Terrestrial Vertebrate Family groupings are discussed in Source Habitats for Terrestrial Vertebrates of Focus (Wisdom et al. (2000)). Most ungulates in the basin were not identified using these criteria. However, because of the interest in elk, mule deer and white-tailed deer, the effects of the alternatives on these species were analyzed and disclosed in addition to the effects on the family groupings.

Comment: *We are concerned that the population levels for pronghorn antelope, sage grouse, and Columbian sharp-tailed grouse appear to decrease from current levels with all alternatives.*

Response: The Science Advisory Group completed an analysis looking at why the management direction in the preferred alternative as not projected to prevent the loss of additional habitat for rangeland species. Based on their analysis, the assumed levels of funding available for rangeland maintenance and restoration will not be enough to reverse the declining trends in rangeland habitat conditions. This information has focused attention on rangeland maintenance and restoration needs, and additional funding from the Congress would be needed to address them.

Comment: *The Final EIS should identify a different preferred alternative, because the preferred alternative in the Supplemental Draft EIS would allow many indicator species populations to decline and does not include enough habitat connectivity protection.*

Response: One of the objectives of the terrestrial strategy is to improve habitat connectivity through restoring and repatterning vegetation types to where they should occur on the landscape. In general, the proposed decision would result in better conditions for terrestrial vertebrates on BLM- and Forest Service-administered lands. Most of the species in the following groups would see improved conditions compared to current conditions: old-forest species, riparian species, and species that use habitats that have declined substantially in geographic extent from historical to current periods. Conditions for rangeland species are expected to be stable or declining because of limited restoration technology and an assumed future funding level that would not meet anticipated need. Additional information related to rangeland species is provided in Final EIS.

Viability

Comment: *The statement in Chapter 4, page 84, in the Supplemental Draft EIS (“[the regulations implementing the National Forest Management Act make] it clear that viability is a requirement of the federal landscape”) should be modified to specify that the regulation applies only to lands administered by the Forest Service, because these regulations do not apply to BLM-administered lands.*

Response: This statement has been modified to make the suggested clarification in the Final EIS.

Comment: *An interim species response matrix should be developed by the Science Advisory Group or another entity which addresses the entire project area instead having each administrative unit develop its own matrix. Alternatively, guidelines for development of this matrix could be included in the Final EIS.*

Response: Until WCIs have been developed and implemented, a modified matrix has been developed to assist field units in determining the consistency of their activities with aquatic, riparian, and hydrologic standards and objectives in the Record of Decision. (See the Final EIS, Appendix 9, for more information about this matrix.) The modified matrix is a multi-scaled diagnostic tool that will evaluate site-level projects in the context of conditions at the subwatershed or watershed scale. However, this diagnostic tool cannot be used alone to make Endangered Species Act effect determinations

The modified matrix is a compilation of the existing U.S. Fish and Wildlife Service (USFWS) Matrix of Diagnostics/Pathways and Indicators and the National Marine Fisheries Service (NMFS) Matrix of Pathways and Indicators. The modified matrix was developed by a task team composed of regulatory and land management technical specialists working under the Interagency Implementation Team (IIT) established to streamline implementation of PACFISH, INFISH, and the Northwest Forest Plan.

Comment: *The objective to provide habitat supporting viable populations of harvestable plant and animal species should be clarified by: identifying what populations and/or species are involved; providing measurable goals for viability and harvestability; and defining what will be considered “meaningful exercise of treaty rights.”*

Response: This proposal is a complex matter and was considered; however, no changes were made at this time. In discussions with the tribes through the Tribal Working Group, the intent has been communicated that the objective of federal land management was to work towards harvestable populations of plant and animal species, beyond simply “recovering” these species. Given the coarseness of the project data and the broad-scale nature of the direction, it is not possible to quantify these goals as suggested. (See sidebar on Basin-wide Tribal Issues, Chapter 4, page 175 of the Supplemental Draft EIS.

Comment: *The standard that directs the agencies to determine if there could be adverse effects on special habitat features such as caves, mines, cliffs, talus, or burrows and to discuss and mitigate any effects (Standard B-S50) should be strengthened to make this requirement binding.*

Response: The provisions contained in any of the standards (in this case, to discuss and minimize or mitigate adverse effects of special habitat features) are considered "binding" direction.

Comment: *There are no binding standards specific to wildlife species that are not federally listed.*

Response: All direction in base-level, restoration, T watershed, A1 and A2 subwatershed objectives and standards are mandatory and required. Many of these were specifically developed to maintain or restore habitat for all species that occur in the project area. A key feature of the terrestrial strategy is to restore and repattern vegetation types to where they should occur on the landscape, which should provide for sustainable habitat conditions for all wildlife species.

Comment: *The preferred alternative apparently trades off the short-term viability of species, even listed species, in the pursuit of experimental long-range restoration goals (Chapter 3, page 85).*

Response: It is not the intent of Objective B-O53, to trade off short-term viability. As discussed in the rationales, some direction may, at times, have adverse short-term effects on individuals but long-term benefits to a given species. The short-term adverse effects anticipate should be of a limited degree, so that viability of a species would not be an issue in the long term.

Comment: *The project includes no viability thresholds and has not conducted the appropriate surveys for wildlife species of concern.*

Response: As described under the Species Viability and Persistence discussions in Chapter 4 of the Supplemental Draft EIS, the terrestrial and aquatic species effects analyses provide the information that decision makers will use to judge whether federal habitat management meets the viable populations requirements of the National Forest Management Act. The necessary analysis that contributes to determining likelihood of viability is presented in the Final EIS; however the final determination of viability

will be made in the Record of Decision. Because of the broad-scale nature of this project, surveys are not necessary. Extensive literature searches and expert opinion were used to identify species presence in the basin.

Comment: *The project needs to consider all available science, and thoroughly scrutinize activities and conditions that cause the elimination, fragmentation, and degradation of wildlife habitat.*

Response: The Science Advisory Group has reviewed the Final EIS and determined that all applicable science was considered, and that the Final EIS is consistent with existing and available scientific knowledge.

Habitat Linkages, Connectivity, Patch Sizes, Corridors, Fragmentation, Fringe Habitats, Edges

Comment: *The EIS should include more information and analysis of habitat fragmentation, patch size, distribution, and juxtaposition.*

Response: Analysis of habitat fragmentation, patch size, and distribution was reconsidered in the Final EIS. However, the existing available information did not require changes be made to the proposed decision.

Comment: *Several commentors believe that the preferred alternative should require that broad-scale habitat connectivity and linkages for all wildlife species including wide-ranging carnivores be restored. It was suggested that specific indices or measures of connectivity be developed to better support conclusions in the analysis, and key linkage habitats should be identified and mapped.*

Response: The long-term goal of the terrestrial strategy is to have a sustainable mix of habitats that are patterned to be consistent with the landform, climate, and biological and physical characteristics of the ecosystem and that provide a network of source habitats to meet terrestrial species needs. The effects on connectivity were included in the terrestrial model predictions. In addition, repatterning of habitat is intended to improve the connectivity of habitat for wildlife.

Comment: *In addition to mapping low road density carnivore habitat, the EIS should map smaller high quality habitats between the core areas and identify key linkage habitat.*

Response: Areas of high quality, sustainable, terrestrial vertebrate habitat were mapped as T watersheds. No management direction is imposed for the areas identified on Map 2-11b of the Supplemental Draft EIS. These areas are presented as data for local land managers to use. Alternative S2 has direction specifically related to corridors and linkages for wide-ranging carnivores.

Comment: *The direction in the preferred alternative concerning broad-scale habitat connectivity and linkages should be broadened to include plant, bird and animal species, not just wide-ranging carnivores.*

Response: The proposed decision would, over time, improve habitat connectivity and linkages for all species through restoration of habitats that have declined from historical to current periods, and through repatterning of vegetation to be more consistent with landform, climate, and biological and physical characteristics of the ecosystem.

Comment: *The effects on lynx populations in Oregon were not analyzed. The EIS should address the cumulative effects of the preferred alternative on lynx metapopulations and movement of individual lynx among these metapopulations. In addition, the EIS should discuss the effects of increased habitat fragmentation and road density on lynx mortality from trapping, poaching, and incidental take, as well as the role of old forests as refugia for lynx.*

Response: The coarse-scale habitat and environmental factors used to model effects on lynx may not reflect fine-scale environmental requirements that may account for a large amount of variation in key lynx population characteristics. The population outcome predicted in the Supplemental Draft EIS may be optimistic but is expected to be within the range of population outcomes suggested by current knowledge of the spatial structure of lynx populations in the United States.

The broad-scale effects on lynx were analyzed and the results disclosed in the Supplemental Draft EIS in Chapter 4, on pages 88, 93, 106, and 107. The effects analysis indicates that road density would decrease under the proposed decision, and that road construction into inventoried roadless areas would be rare. Current knowledge suggests that competition with coyotes, cougars, and other predators may have a strong influence on lynx populations. The effects on lynx from trapping, poaching, and incidental take by

humans is believed to be of much lesser influence than competition. The effects on old forests are disclosed in Chapter 4 of the Supplemental Draft EIS on pages 44, 56-57, 61-64, and 67-69.

Comment: *There is little guidance as to how Objective B-O49 will be implemented.*

Response: Objective B-O49, which provides direction on broad-scale connectivity and linkages, was clarified in the Final EIS; an example of an ongoing effort is provided.

Comment: *We see no reason why standards should not be established to achieve the objectives with respect to management of rangeland terrestrial source habitat. Given the status of rangeland habitat dependent Terrestrial Families 11 and 12, establishment of standards to achieve management objectives for these habitats should be considered essential.*

Response: Three standards for achieving and retaining terrestrial source habitats, including those on rangelands, are included in the management direction for terrestrial T watersheds. (See Supplemental Draft EIS, Chapter 3, pages 124-132.)

Comment: *Objective B-O43 (regarding habitats for viable populations, recovery of listed, and meeting social needs) in Chapter 3, page 3-81 of the Supplemental Draft EIS should cover all native species.*

Response: Objective B-O43 covers all species of plants and animals in the project area.

Comment: *The SAG models point toward a high probability of extirpation for the grizzly.*

Response: The outcomes for grizzly bear are indicative of the habitat changes, primarily human development, that have occurred over the past 150 years in the basin, and that there is little likelihood that areas of high human population will be suitable for grizzly bears. The level of outcomes indicate a high level of risk to grizzly bears which needs to be considered in management actions. The Interagency Grizzly Bear Guidelines are an example of how the risk to grizzly bears can be addressed to reduce the level of risk associated with the outcomes.

Mature/Old Forest Habitat Associated Species

Comment: Please identify which wildlife species are associated with old-forest structures.

Response: The species in Terrestrial Families 1 and 2 are primarily associated with old forests. A list of species in each Terrestrial Family is provided in the Supplemental Draft EIS, Chapter 3, page 66.

Comment: The EIS proposes levels of mature and old forest that are unrealistic, because there is not enough early and mid seral forest to sustain such levels. Furthermore, the amount of mature and old forest in the alternatives does not reflect historical conditions. Too much old-growth forest would be logged under the preferred alternative.

Response: The historical levels of late seral forest, mid seral forest, and early seral forest were derived from *Source Habitats for Terrestrial Vertebrates of Focus* (Wisdom et al. 2000). They reflect historical conditions as closely as can be determined at this time. The Final EIS does not allow for loss of old forest conditions through timber harvest in the low to mid elevations. The Final EIS attempts to protect old-forest areas from loss to natural disturbance through thinning, prescribed fire, and other fuel management activities.

Rangeland Habitat Dependent Species

Comment: The Final EIS and ROD should provide a thorough analysis and discussion on the effects of various combinations of the 10 options (Chapter 4, pages 100-102) at varying levels of intensity to address the needs of rangeland habitat dependent species.

Response: The Final EIS contains an analysis that addresses restoration options and rangeland species outcomes. The Scientific Advisory Group explored the sensitivity of their modeling relative to: (1) funding available to restore rangeland habitats and (2) decreases in the projected adverse effects of livestock grazing. (See next comment for further detail and response). Because the Interior Columbia Basin Ecosystem Management Project is an overall, broad-scale management strategy and an approach intended to integrate direction rather than to keep direction narrow and functional it would be inappropriate to take each of the 10 options as separate variables, out of context with a landscape approach.

Comment: Terrestrial Families 11 and 12 are projected either to not improve or to decline under all alternatives of the Supplemental Draft EIS. Is that in part a reflection on the very modest proposed reductions for livestock grazing?

Response: The Final EIS includes the Science Advisory Group analysis of options for reducing the impacts of uncharacteristic livestock grazing and considers increases in restoration funding. The Supplemental Draft EIS direction indicates that adverse livestock grazing effects will be addressed and eliminated over time (Objective B-O10, which broadens the application of Healthy Rangelands from BLM- to Forest Service-administered lands). The Final EIS prioritizes actions to address uncharacteristic livestock grazing effects in locations where grazing might be a "factor in causing an area to function 'at risk'" (Standard B-S12). In the source habitats of concern for Terrestrial Families 11 and 12, the direction in the proposed decision (Objective B-O33) is that vegetative composition would be managed such that source habitats are maintained. The Final EIS does not prescribe livestock stocking levels or permitted/authorized Animal Unit Months, which will require finer-scale analyses and decision-making. However, to estimate broad-scale effects, an assumption about stocking levels was needed.

Comment: At-risk shrub- and grassland-dependent species, such as sage grouse, are expected to continue to decline under the preferred alternative. Rangelands and shrub-steppe habitats should be identified as a restoration priority in order to prevent additional species from being listed under the Endangered Species Act. It seems like the EIS did not adequately address every option that could bring better outcomes to these species.

Response: The Scientific Advisory Group completed an additional analysis after the Supplemental Draft EIS was released, to determine if anything could be done to improve the outcomes for rangeland species. They looked at two scenarios, decreasing detrimental livestock grazing effects by approximately 50 percent and by approximately 100 percent. Under both scenarios, they looked at varying levels of active restoration and the funding investments that would be required. Both scenarios were predicted to slightly improve the projected environmental outcomes for sage grouse and Columbian sharp-tailed grouse. However, the restoration costs associated with those slight improvements were considered to be logistically

challenging. SAG's conclusion was the management direction as described in the Supplemental Draft EIS is adequate, and that the major factor limiting outcomes for rangeland species is a lack of available funding to accomplish the direction. Chapter 4 in the Final EIS, pages 4-12 and 4-13, provides more discussion.

The Final EIS contains direction to maintain source habitats for rangeland species, and to restore source habitats for rangeland species that have declined substantially from historical to current periods, including direction that results in reduction of adverse livestock grazing effects. Final EIS direction also calls for managing source habitats to be resilient to natural disturbances, maintaining or restoring noxious weed-free plant communities, and managing uses, such as livestock grazing, to provide healthy vegetation and soil conditions.

Geographic areas have been identified that will help in prioritization of funding to benefit rangeland species by indicating broad-scale opportunities for various species (see Maps 2-11a, 3-5, and 3-10 in the Supplemental Draft EIS). In addition, high restoration priority subbasins have been identified (see Maps 3-8 and 3-9 in the Supplemental Draft EIS).

Snags and Downed Wood

Comment: *Several comments express concern about the standard that directs the agencies to modify default numbers for snags and coarse woody debris within a five-year timeframe (Standard B-S30). Some commentators do not believe enough scientific information is available to develop locally-specific standards. Others express support for the development of local standards, and they request that language be added to Appendix 12 to make it clear that local standards will be developed and to specify what process will be used to develop them. Some people think that the five-year time frame for developing local standards is too short, while others think that the process should be completed in one to two years.*

Response: The guidance on this issue was reviewed, and no changes were made in the Final EIS.

The snag and downed woody debris levels were determined based on expected sustainable levels. By providing snag and downed woody debris levels that are sustainable, the requirements of cavity-dependent species expected to occur on a site should be met. At

the end of 100 years, the number of snags on BLM- and Forest Service-administered lands is expected to increase over current conditions.

The tables in Appendix 12 of the Supplemental Draft EIS were developed to assure that appropriate numbers of snags and levels of coarse woody debris would be maintained while standards that are more appropriate for local conditions are developed or verified. The final EIS directs that administrative units or groups of units modify the default standards in Appendix 12 within five years after the signing of the Record of Decision.

Comment: *The objective to maintain and/or recruit adequate numbers, species, and sizes of downed wood to meet ecosystem needs (Objective B-O31) should be a standard. In addition, the guidance to "manage for snag species appropriate to the site" should be changed to "levels of snags should be consistent with the predominant fire regime and with prescribed fire objectives."*

Response: This information was reviewed; however, no changes were made to the direction in Chapter 3, and this direction remains in the Final EIS as an objective. This matter can be evaluated during implementation at the appropriate scales where there is available information. Further analysis of the effects of the proposed decision on snag species or their habitats, will be conducted on a local basis during site-specific analysis from locally available fine-scale data and information.

Comment: *Please explain why the emphasis in the preferred alternative is on increasing snag numbers in the long term when uncharacteristic wildfires are being fueled by existing levels of large downed wood is that are currently above historical levels on most forested lands. Also, timber harvest and prescribed fire will remove dead and dying material from the site and inhibit the recruitment of downed woody material.*

Response: The direction in the Final EIS strives to restore areas where the number of snags or amount of downed wood is out of balance with sustainable levels. In some areas of the basin, amounts are lower than desired and in other areas amounts are higher. Snags and downed wood can sustain fires; however, vegetative communities in the interior Columbia River Basin have evolved with fire disturbance and snags and downed wood within sustainable levels as part of this system.

Comment: *The role that broken top and spike top trees have in providing habitat in dry pine forests should be made a part of the objective in the preferred alternative which addresses snags and coarse woody debris (Objective B-O31).*

Response: This matter was reviewed; however no changes were made. This issue is more appropriately addressed at the fine scale when local project plans are being developed; further analysis can be completed using local available fine-scale data and information.

Comment: *The snag retention requirements do not retain enough snags to provide for viable populations of cavity dependent species, and they do not meet the needs of other wildlife. All large snags and large trees should be treated as "special habitats" that are excluded from work areas, so they do not have to be felled for worker safety or operational considerations. If not, then the expected number of snags that would be felled should be addressed in the analysis.*

Response: The snag and downed woody debris levels were determined based on expected sustainable levels. By providing snag and downed woody debris levels that are sustainable, the requirements of cavity dependent species expected to occur on a site should be met. At the end of 100 years, the number of snags on BLM- and Forest Service-administered lands is expected to increase over current conditions.

Additional specific on-the-ground measures may be needed to meet the needs of wildlife and provide for safety. The specific measures would be determined during project design, and the number of snags to be felled for safety should be addressed in the site-specific National Environmental Policy Act analysis process.

Comment: *The standard that directs the agencies to maintain and/or recruit snags and coarse woody debris within desired ranges (Standard B-S28) should take into account slope, aspect, and fire history.*

Response: The tables in Appendix 12 of the Supplemental Draft EIS were developed to assure that appropriate numbers of snags and levels of coarse woody debris would be maintained while standards that are more appropriate for local conditions are developed or verified. The preferred alternative directs that administrative units or groups of units modify the default standards in Appendix 12 within five years after the Record of Decision for the

ICBEMP is signed. When these local standards are developed, appropriate fine-scale variables such as slope and aspect will be considered.

Comment: *The preferred alternative should include guidance to the agencies about using green trees as replacements for snags that will eventually fall down and become downed wood.*

Response: Base-level direction in the Final EIS requires the agencies to maintain and/or restore large shade-intolerant trees and snags in densities that are consistent with the range of historical conditions. The rationale for this standard is that large trees are a future source of large snags, and it is important to have present and future sources of large trees and snags at adequate levels through time. The proposed decision also directs that administrative units or groups of units modify the default standards in Appendix 12 within five years after the Record of Decision is signed to develop local snag retention and green tree replacement requirements.

Source Habitats/Terrestrial Families

Comment: *The Predicted Environmental Outcomes and Population Outcomes table in Chapter 2 of the EIS should include a footnote that defines each of the outcome levels (the table in the Draft Supplemental EIS uses only letter notations).*

Response: A footnote has been added to the table to direct the reader to the Effects of the Alternatives on Terrestrial Vertebrates section in Chapter 4 for a complete discussion of the various outcome levels.

Comment: *The discussion in Chapter 4 about which options were considered to address the slowing the decline of rangeland terrestrial habitats should make it clearer which options were or were not included in the preferred alternative, and why; and the effects of implementing each option.*

Response: The Science Advisory Group has completed additional analysis on rangeland species, which is discussed in the Final EIS. Priority for maintenance and restoration of rangeland habitats is included in the proposed decision.

Comment: *Several species have a 'poor' rating, which indicates the likely long-term loss of these species, which is in conflict with the purpose of ICBEMP and the national policy of the land management agencies.*

Response: A poor rating is not an indication of “likely long-term loss” of a species; rather, it indicates a higher risk to the species than a good or fair rating.

Comment: *There are no standards, only objectives, in the Terrestrial Source Habitat Restoration section.*

Response: The achievement of the objectives over time is a requirement of the proposed decision. However, every objective does not need a standard to specify how to achieve the objective. In many cases, the establishment of a standard at the broad-scale is not appropriate.

Terrestrial T Watershed Direction

Comment: *The T watershed direction should make clear that the short-term goal of conservation of old forest (Objective T-O1) takes precedence over the goal of long-term sustainability (Objective T-O2).*

Response: Objective T-O2 was clarified to reflect that natural processes should be permitted when they contribute to habitat sustainability, not just to long-term sustainability.

Comment: *The standard requiring no new road construction be allowed in source habitats within T watersheds in the short term (Standard T-S3) is not appropriate for inclusion in the preferred alternative because it cannot be considered broad-scale direction.*

Response: The direction acknowledges the difficulty of maintaining some of the source habitats types in T watersheds, but it was considered that the relative “roadless” nature of these T watersheds should be maintained to provide the appropriate maintenance of the condition of the habitat.

Comment: *The preferred alternative contains an objective that directs the agencies to “evaluate the effects of the action on pertinent species within the five Terrestrial Families to minimize short-term risk to the continued persistence of the species” prior to conducting management actions within the source habitats that have not declined substantially in geographic extent. This direction should be expressed as a standard, not an objective.*

Response: The achievement of objectives over time is a requirement of the proposed decision. In many cases, the establishment of a standard at the broad scale is not appropriate. After additional review, the

EIS Team made the decision to leave this direction as an objective in the Final EIS.

Comment: *The selection criteria for each watershed identified as a T watershed in the Supplemental Draft EIS should be presented and explained in the Final EIS. The Nine Mile watershed should be designated as a Terrestrial T watershed.*

Response: T watersheds were identified because the amount and distribution of source habitats, and the associated disturbance processes that maintain these habitats, have undergone relatively little change since the historical period. The Nine Mile watershed was not identified as a T watershed because it did not meet these criteria. However, the base-level and restoration direction in the proposed decision would still apply to this watershed. T watersheds are only one piece of the overall strategy to maintain and restore networks of habitat for terrestrial species.

Comment: *The distribution of T watersheds appears to be inadequate with regard to protection of low elevation habitats, rangelands, and habitats critical to many species of concern. The Science Advisory Group concluded that T watersheds do not constitute a sufficiently large area to lead to overall improvement in population outcomes for most species.*

Response: T watersheds are only one piece of the overall strategy to maintain and restore networks of habitat for terrestrial species. They are identified for the specific purpose of conserving in the short term the most sustainable areas of source habitat.

Comment: *If the role of T watersheds is to serve as anchors for a landscape scale terrestrial conservation strategy, then it becomes critical that ICBEMP clearly direct the resource managers to protect remnant large old trees in these areas as well as all stands where they occur.*

Response: As part of the base-level direction, Objective B-O30 addresses maintenance of old-forest types in short supply.

Comment: *The standards and objectives for T watersheds contain no restrictions on what can be done to repattern source habitats.*

Response: The objectives and standards in the proposed decision direct that vegetation patches, patterns, structure, and species composition be

restored to be more consistent with the landform, climate, and biological and physical characteristics of the ecosystem.

Threatened, Endangered, Proposed, Candidate, Sensitive Wildlife Species

Comment: *Please explain why state wildlife agency lists of species of risk are not presented in the EIS, and address how the concerns of groups such as Partners in Fish, the Audubon Society, and others were considered.*

Lists are constantly changing as species are added or taken off. Implementation data-gathering steps in the future, and in the step-down processes, will consider these species during local project-level National Environmental Policy Act (NEPA) processes.

Comment: *Please clarify the relationship between the EIS and conservation strategies and recovery plans. Specifically, explain whether subsequent actions to implement the preferred alternative must comply with conservation strategies and recovery plans; and describe how objectives in recovery plans and conservation strategies are being incorporated into the Final EIS and into subsequent planning and NEPA processes. Also, does the proposed decision implement the Lynx Conservation Strategy?*

Response: Standard B-S55 in Chapter 3 of the Final EIS states that "Relevant management activities shall be designed and implemented to be consistent with adopted recovery plans, conservation strategies, and other appropriate reports. In the Final EIS this standard was clarified regarding what constitutes an "adopted" plan or strategy. The proposed decision would not specify which conservation strategies should be implemented, only that relevant management actions will be consistent with adopted strategies.

Comment: *Please clarify which process is used (either Endangered Species Act consultation or the National Environmental Policy Act process) to identify whether there are "potential negative effects on listed or proposed species" which would trigger the requirement to conduct Ecosystem Analysis at the Watershed Scale.*

Response: Potential negative effects on listed or proposed species would be identified during Subbasin Review. If Subbasin Review was not completed then it would need to take place before the National Environmental Policy Act (NEPA) process was

initiated. The analysis process should be kept simple (a Biological Evaluation or Biological Assessment would not be needed) to reach the determination of potential negative effects. It is meant to be a cursory analysis, and not a basis for informal or formal consultation under the Endangered Species Act (ESA).

Comment: *The contributions of research natural areas and areas of critical environmental concern to species recovery should be addressed in the Final EIS.*

Response: The Science Advisory Group completed an analysis of natural areas; however, it does not include special designations such as areas of critical environmental concern. A detailed discussion of natural areas was added to Chapters 2 and 4 of the Final EIS.

Comment: *The Supplemental Draft EIS states that "the peregrine falcon was recently delisted by the U.S. Fish and Wildlife Service, and is now a Forest Service/BLM sensitive species". This statement should be clarified to reflect the fact that not all BLM and Forest Service units covered by the EIS include this species on their lists of sensitive species.*

Response: The data- and information-gathering steps in the implementation and step-down process will consider these species and their local listing status and populations during local project-level NEPA analysis.

Comment: *Preventing the listing of additional species under the Endangered Species Act and the recovery of already listed species should be listed as one of the management priorities in the EIS.*

Response: Chapter 1, page 10, of the Supplemental Draft EIS identifies "help restore and maintain habitats of plant and animals species, especially those of threatened, endangered, and candidate species" as part of the intent of the project.

Comment: *Chapter 2 in the Supplemental EIS should be updated to reflect the fact that the U.S. Fish and Wildlife Service has completed its status reviews for Westslope cutthroat trout and redband trout and decided not to list them.*

Response: The correct status of westslope cutthroat trout and redband trout has been clarified in the Final EIS. In spring 2000, the U.S. Fish and Wildlife Service determined that the westslope cutthroat trout

species condition does not warrant listing as threatened or endangered species. This is updated in Chapter 2 of the Final EIS.

Comment: *Protect habitat for all other vulnerable and endangered species that live in the 63 million acres.*

Response: The broad-scale species of focus were identified in *Source Habitats for Terrestrial Vertebrates of Focus* (Wisdom et al. 2000). One focus of proposed decision is the conservation and restoration of habitat for these broad-scale species. However, many species will benefit from this direction.

Comment: *The management direction violates the intent of the Endangered Species Act. The very restrictions you place on many actions make them not achievable in today's or even tomorrow's economy. The reality of this and other planning proposals are that the species are being affected by 'non-action' alternatives (for example, there will be a lack of ability to reach and treat critical habitats threatened by large, destructive wildfires).*

Response: The amount of funding was limited to a level that would be reasonable to expect. However, achievement of project objectives would not be driven by funding levels; only timing of implementation would be affected by funding. Alternative S2 directions does focus on the reduction of risk from large, uncharacteristic wildfires.

Comment: *One of the biggest disappointments in an otherwise generally positive document is the decrease in outcome from "C" to "D" for grizzly bear. Why in the world should grizzly bears be managed from a "C" to "D"?*

Response: The discussion in Chapter 4, page 106, of the Supplemental Draft EIS emphasizes two points. First, some direction in Alternative S2 was not included as inputs to the model predicting effects on grizzly bear, and this direction regarding corridors should have a positive effect on grizzly bears. Second, the effects analysis considered grizzly bear habitat throughout the basin, but there are many parts of the basin that are not managed for grizzly bears. When the occupied grizzly bear recovery areas alone are considered, the situation would appear to be stable or improved.

Comment: *The Supplemental Draft EIS states that "management direction for threatened, endangered, and proposed species would apply to habitats used by those species." How will this be determined?*

Response: This statement refers to areas occupied by listed species or designated as critical habitat. Consultation with the U.S. Fish and Wildlife Service or National Marine Fisheries Service will be important in identifying habitats used.

Comment: *It appears that the proposed alternative continues to defer the resolution of key risk management issues until later decision points, sidestepping a key purpose of the project—to provide clear management direction that ensures that legal obligations to protect and restore species and their habitats are met.*

Response: Risk issues were addressed from a broad-scale perspective; however, many risk issues are fine scale and require local data to resolve. The direction in the proposed decision related to step-down processes is intended to facilitate risk management and a tie between broad-scale direction and fine-scale data. The management direction also includes base-level direction (for example RCAs) and spatial direction (A1, A2, and T areas) to address broad-scale risk issues.

Comment: *The list of threatened and endangered species that may be affected by the project includes dozens of terrestrial species that have not received much focus in the last few years as part of the project process.*

Response: The Final EIS includes direction that addresses listed species. Effects of the management direction were predicted for currently listed species that are considered broad scale by the Science Advisory Group; see Chapter 4, pages 104-107 in the Supplemental Draft EIS.

Comment: *Does the proposed action implement the Lynx Conservation Strategy? The Final EIS and Record of Decision should clearly indicate which conservation strategies will be implemented.*

Response: The EIS does not make a decision on which conservation strategies should be implemented, but that relevant management actions must be consistent with them. Standard B-S55 in Alternative S2 states that "Relevant management activities shall be designed and implemented to be consistent with adopted recovery plans, conservation strategies, and other appropriate reports." In the Final EIS this standard was clarified regarding what constitutes an "adopted" plan or strategy.

Comment: Where conflicts between differing goals and objectives arise, those relating to protection of threatened and endangered species should take priority over the other goals and objectives wherever required to protect and recover threatened and endangered species.

Response: The Hierarchy of Management Direction has been edited to clarify that the Threatened, Endangered and Proposed Species direction in the proposed decision takes precedence over all other ICBEMP direction.

Comment: More high restoration priority direction should be identified for the in the Selkirk-Priest Basin. The area is extensively roaded and these routes should not continue to fragment the network of habitats.

Response: Restoration direction in the preferred alternative includes direction to restore habitat by reducing roads. Although high restoration priority subbasins were identified based on specific criteria, restoration activities in them should consider all restoration needs.

Wide-ranging Carnivores (Gray Wolf, Grizzly Bear, Lynx)

Comment: All references to lynx in the EIS should be updated to reflect its status as a listed threatened species (instead of proposed for listing), and the status of the U.S. Fish and Wildlife Service EIS for grizzly bear should be updated.

Response: Reference to the current listing status and how it affects the proposed decision of Lynx is now incorporated in Chapters 2, 3, and 4 of the Final EIS.

Comment: The information about current distribution of gray wolves should be updated to reflect their presence in Washington State.

Response: Chapter 2 of the Final EIS has been edited to reflect this information.

Comment: The direction in the preferred alternative for wide-ranging carnivores needs to be strengthened and clarified. The management objectives for these species should be to protect and restore populations and individuals on an ecoregional basis, and to avoid, not minimize, adverse effects. Wide-ranging carnivores are good examples of the kinds of issues that necessitate ecoregional planning. The Supplemental Draft EIS does not provide

a strategy to address the needs of these species, but rather only guidance to encourage managers to “coordinate across multiple jurisdiction boundaries” and “minimize isolation of wide-ranging carnivore populations.”

Response: It is recognized that linkage areas cross federal, state, and private lands and that the BLM or Forest Service have no authority over these lands. Therefore, a role of BLM and Forest Service is to facilitate coordination among all property owners. This direction was enhanced in Chapter 3 of the Final EIS to clarify the need for an overall regional approach.

In addition, an overall terrestrial strategy is incorporated in the base-level, restoration, and spatial direction. This direction supplements the objectives and standards specifically related to wide-ranging carnivores. The data and maps from Source Habitats for Terrestrial Vertebrates of Focus (Wisdom et al. 2000) were used in the development of the proposed decision.

Comment: The EIS should analyze the impacts of the alternatives on the snowshoe hare, the lynx's main prey species. In addition, the EIS should address potential impacts to red squirrels and other alternate prey for lynx.

Response: Habitat for prey species is considered in the identification of source habitats in *Source Habitats for Terrestrial Vertebrates of Focus* (Wisdom et al. 2000). This information was used to develop the management direction in Chapter 3, and to predict broad-scale effects in Chapter 4 of the Supplemental Draft EIS.

Comment: Standard B-S53 requires management to “identify and map important wide-ranging carnivore areas,” but no further action is required once areas have been identified.

Response: Standard B-S53 is nested under objective B-O50 and provides information to aid in achievement of B-O50. Standard B-S53 references the Subbasin Review. A purpose of Subbasin Review is to use mid-scale information on status, risk, and opportunities within a subbasin as context for finer-scale analysis and to identify and prioritize types of management activities appropriate to meet broad-scale objectives. Identification of habitat is appropriate to accomplish the objectives of Subbasin Review.

Comment: *Standard B-S54 only requires that the National Environmental Policy Act (NEPA) documentation should predict impacts on carnivores. There is no requirement to avoid adverse effects.*

Response: Standard B-S54 is nested under B-O51 and directs that effects of implementing B-O51 be documented through NEPA analysis. The word “should” in Standard B-S54 was changed to “shall” in the Final EIS.

Comment: *Biological opinions for grizzly bears that will include Reasonable and Prudent measures and Terms and Conditions should be retained as standards under ICBEMP.*

Response: The aquatic strategies in the proposed decision are specifically intended to replace the interim PACFISH and INFISH direction and the associated steelhead and bull trout Biological Opinions. It is not intended that the direction would take precedence over fine-scale threatened and endangered species direction currently in land and resource management plans. Objective B-O52 directs that agencies contribute to recovery of federally listed species, and the hierarchy of management direction has been further clarified in the Final EIS to state that the threatened and endangered species direction takes precedence over other all direction.

Comment: *The Selkirk/Cabinet-Yaak area is excluded on Map 2-11b. The Supplemental Draft EIS must address specific restoration measures required to return the Selkirk and Cabinet-Yaak areas to secure, source habitat.*

The preferred alternative does not include the Selkirk and Cabinet-Yaak grizzly bear populations in the seven areas identified as building blocks of a network of habitat for wide-ranging carnivores.

Response: There is no specific direction associated with management of the areas shown on Map 2-11b. The areas shown on the map contain specific characteristics which the Science Advisory Group identified as important to wide-ranging carnivores. The areas on Map 2-11b are displayed as information to aid local decision makers. The base-level and restoration direction in the Final EIS applies to the Selkirk/Cabinet-Yaak area and to all Forest Service- or BLM-administered lands in the project area, including those areas shown in Map 2-11b.

Seven areas are identified as building blocks based on certain habitat and road density criteria. Although

the Selkirk and Cabinet-Yaak areas do not meet these criteria, these areas are still recognized as recovery areas for grizzly bears and would continue to be managed to reach recovery. The restoration direction in the proposed decision is expected to improve conditions for grizzly bears in these two areas.

Comment: *The preferred alternative would increase timber production over that resulting from current direction. Increased timber harvest and forest management activities are not consistent with recovery of wide-ranging species.*

Response: Vegetation management activities under the proposed decision would be designed to improve sustainability of habitats. This approach should benefit these species. Where conflicts arise between threatened or endangered species recovery and direction in the Final EIS, conflicts would be resolved to be consistent with species recovery. In some cases it may be necessary to set back succession to aid species recovery (for example, create thick stands of young trees to benefit snowshoe hare which are prey for lynx).

Wildlife - Human Interactions

Comment: *Roads can have both positive and negative effects on wildlife. The Supplemental Draft EIS emphasizes the negative aspects.*

Response: Generally, the negative effects of roads on wildlife outweigh potential positive effects. However, the management direction recognizes that while roads may have negative effects on wildlife, they are necessary to achieve other objectives. The Final EIS requires that road analysis be performed to identify needed roads and reduce adverse impacts.

Comment: *The EIS should analyze the historical, existing, and potential cumulative effects of mineral mining operations on the regional ecosystem and the effects of habitat disturbance on species viability.*

Response: The historical and existing effects of mining are included within the overall projections of habitat condition. For example, the Supplemental Draft EIS projects that current levels of impact would continue into the future. However, while in a particular location mining can cause substantial adverse effects, at the basin scale these effects may be minor, because of the limited number of mining

operations compared to the amount of lands administered by the Forest Service and BLM in the project area. Therefore, it was not possible to separate out the specific effects of mining operations. These would be done as needed through step-down processes and local-level National Environmental Policy Act (NEPA) analysis.

Comment: *The EIS understates the human health and safety problem of habituated wolves, mountain lions, and grizzly bears in the urban-suburban-rural interface. The adverse effects on humans from these species (such as injury and fear) should be addressed.*

Response: This issue was considered, but these effects were not identified by the Science Advisory Group as broad-scale effects that would result from the management direction. These types of effects are best addressed at through the step-down process and local-level National Environmental Policy Act (NEPA) analysis.

Aquatic Species

Comment: *The A1/A2 subwatersheds are too small, too dispersed, or too few to be effective. Most A1 areas are already off-limits because they are in wilderness areas, so designating them adds little value.*

Response: The criteria used to designate A1/A2 subwatersheds include the presence of known strong populations for the seven key salmonids; important anadromous fish populations in the Snake River Basin; genetically pure populations of anadromous fish outside the Snake River Basin; and/or fringe populations for four of the key salmonids. These areas are intended to provide a system of core subwatersheds that are the anchor for recovery and viability of widely distributed native fishes. They are not intended to be static, long-term reserves. A1 subwatersheds were designed to have a high component of congressionally designated wilderness because these areas contain habitat that often nears attainment of aquatic objectives; it is important to retain them in their current condition. In addition, these A1/A2 subwatersheds are only one component of a larger aquatic/riparian/ hydrologic restoration strategy. Other elements of the strategy, such as standards and guidelines and designation of high restoration priority subbasins, supplement the direction in the preferred alternative for the A1/A2 subwatersheds.

Comment: *A table should be placed in the Final EIS showing the acres of A1/A2 subwatersheds in existing protected areas.*

Response: To the extent possible using broad-scale data, the location of the A1/A2 subwatersheds is displayed in the Final EIS (Map 3-11a). However, not all existing protected areas in the project area have been mapped and digitized into a Geographic Information System. This situation prevents accurate analysis of overlaps at the basin scale. When BLM and Forest Service land use plans are revised to conform with the ICBEMP Record of Decision, an analysis of overlapping land use allocations, using finer-scale data, would be available for each administrative unit.

Comment: *The Final EIS should include a process or protocol for refining the A1/A2 subwatersheds and provide an adaptive management loop for future needs and modifications based on new or existing finer-scale information.*

Response: The step-down process provides the opportunity to validate and, as necessary, refine A1/A2 subwatershed locations using existing finer-scale information. Appendix 18 describes the process that will be used to fine-tune these delineations and make future changes and updates.

Comment: *The A1/A2 management direction is reasonable but lacks enforcement teeth and falls short of what is needed to safeguard watersheds with important fish habitats.*

Response: The ICBEMP Record of Decision will include a specific implementation monitoring program (see Appendix 10). The information collected through this program will be used to determine if activities are implemented as envisioned in the preferred alternative and whether standards and guidelines for A1/A2 subwatersheds are being followed. This monitoring will be conducted as a cooperative effort that will involve the federal regulatory agencies and other interested and affected parties.

Comment: *The effects of dams and hatcheries should be addressed in the Final EIS.*

Response: Regulation of dams and hatcheries is outside the land management agencies' jurisdictions and, therefore, is outside of the scope of the manage-

ment direction contained in this EIS. Information about the effects that dams and hatcheries have on various native fish species is presented in Chapter 2 of the Supplemental Draft EIS (for example, pages 162 and 163 provide an overview of the effect that dams and hatcheries have had on Interior Columbia River anadromous fishes). The information contained in Chapter 2 was used in the designation of A1/A2 subwatersheds and aquatic restoration high priority restoration subbasins.

Social-Economic-Tribal Components

Economics

Economic Direction

Comment: *The objectives and standards lack innovative strategies within the alternatives to achieve ecosystem restoration using methods that result in economic benefits. These directives simply encourage the hiring of locals to conduct restoration activities.*

Targeting restoration jobs to local communities is likely to require amendments to labor and contracting regulations.

Consider adding an objective or goal to expand existing contracting authorities to better meet local contracting emphases and get results.

Response: The objectives, standards, and guidelines also address making contracts and services as accessible as possible to local firms and individuals, and suggest using innovative approaches such as the stewardship contracting authority. Seeking expanded contracting authorities is an option that may be explored with other partners and stakeholders during the step-down process and implementation as one of several innovative approaches to achieve the objectives of the Final EIS. The first preference will be to use existing legal authorities available to the Forest Service and BLM, as well as other federal partner agencies, to the maximum extent possible.

Comment: *Reword Guideline B-G47 regarding restoration work contracts and local communities to be more clear and meaningful.*

Response: Suggested wording has been incorporated at the beginning of Guideline B-G47 to clarify the meaning.

Comment: *There is a conflict in Alternative S2 direction between targeting subbasins for restoration work based on biophysical (ecological) needs and for areas with highly dependent local communities.*

Response: Chapter 3 of the Supplemental Draft EIS, Management Direction – Restoration (pages 92-124), along with Appendix 15, describe the delineation of broad-scale functional restoration priority subbasins, and the melding of those functional priorities to delineate integrated high restoration priority subbasins. This includes both high priority biophysical and high priority economic and tribal needs. Objective R-O34 directs managers to give first priority in those high restoration priority subbasins to restoration work that can be located near communities that are less economically diverse and more economically associated with goods and services produced from agency-administered lands. Rather than a conflict in direction, it is a matter of setting integrated priorities.

Comment: *There are no enforceable restrictions on old-growth logging, new roading, etc.*

Response: Objectives and standards that limit or exclude harvesting old-growth trees or building new roads, such as “no road construction in A1 subwatersheds in the short term (Standard A1-S2, Chapter 3, page 133), will become part of national forest and BLM district land use plans through amendment of existing land use plans. Such objectives and standards then become administratively and legally enforceable.

Comment: *The wording of Standard B-S17 is confusing. Management flexibility should be explicitly provided to allow removal of unstable lands from the suitable timber base if deemed necessary to reduce the risk for, or prevent increased, landsliding.*

Response: It may be desirable in the case of unstable or potentially unstable slopes to exclude some or all of the timber volume from the allowable sale quantity. Therefore the standard allows the flexibility for this decision to be made at the local level. Local planners would have the discretion to remove unstable lands totally from the timber base if it is deemed necessary to prevent increased landsliding.

Comment: *We are concerned about elevating ecosystem management principles above multiple resource outputs to the point that resource outputs at the forest level are*

treated as a residual product of ecosystem restoration. The law (Organic [Administration] Act of 1897, Multiple Use-Sustained Yield Act of 1960, Resources Planning Act of 1974, National Forest Management Act of 1976) prohibits placing resource outputs in a back-seat role.

Establishing resource output targets must be what drives the Supplemental Draft EIS, or, at least resource output targets must be considered on the same plane as ecosystem management.

A successful ecosystem management strategy would develop a "socially accepted pattern of disturbance."

Response: None of the laws cited places one "use" above another. However, the Endangered Species Act of 1973 (ESA), does establish a higher use priority, which requires the protection of listed species and their habitats (also forest "uses"), at the expense of other resource management activities and outputs if necessary. The various late-successional dependent species such as the northern spotted owl and the marbled murrelet, and the forest management changes instituted through the Northwest Forest Plan, are good examples.

The 1897 Organic Administration Act for the Forest Service states: National Forests shall be established "...for the purpose of securing favorable conditions of water flows, and to furnish a continuous supply of timber for the use and necessities of citizens of the United States;..." This selective citation leaves out one major phrase. The full quotation is: "No national forest shall be established, except to improve and protect the forest within the boundaries, or for the purpose...." The full quotation very definitely provides as a major purpose of national forest management the protection and improvement of the forest – which is a core emphasis of the ICBEMP proposed action, particularly in light of the current and potential species listings under the ESA.

It is expected that the vegetation and disturbance patterns resulting over time from implementation of the proposed action will be more socially acceptable, as well as achieve greater ecological integrity and resiliency, than was the direct and indirect result of past vegetation management activities and practices.

Comment: *No areas have been designated to "produce" as an emphasis.*

Response: Delineation of conserve, restore, and produce were used in the Draft EISs and have been replaced by a more geographically explicit integrated restoration strategy. Delineation of A1 and A2 subwatersheds and T watersheds and Riparian Conservation Areas will supersede land allocations and associated management direction in existing land use plans, in order to meet the ecological and restoration goals. However, other existing land allocations and associated management direction not superseded will remain in force, including those emphasizing commodity production.

Comment: *The Supplemental Draft EIS should include an accurate estimation of how social and economic forces can drive restoration efforts and make them cost-effective.*

The project has not objectively assessed how to achieve forest ecosystem health goals in a cost-effective manner. Commodity production could be an important means to offset restoration costs, while improving environmental quality.

Commercial silviculture, including environmentally sound timber harvest, should be incorporated as part of the plan to generate funds for ecosystem management and provide economic stability to rural communities.

Response: A key component of the proposed decision is setting priorities for restoration efforts based also on social and economic needs. In that way, social and economic factors help to drive restoration work, increasing overall cost-effectiveness by meeting the multiple objectives (physical, biological, economic, and social) of the proposed action.

The projected timber and grazing outputs, as shown in the Supplemental Draft EIS, Table 4-33, are an estimate of the sustainable levels that could be allowed as a consequence of management direction implemented for watershed and ecosystem protection and restoration. Management direction does not specify certain output levels. Rather, it describes desired ecosystem conditions. Therefore, at the broad scale of this analysis, the output levels projected basin-wide and by RAC/PAC are all that can take place while still meeting ecosystem protection and restoration goals.

Commercial silviculture, including commercial thinning, is part of the projected management strategy, although most thinning will be designed to achieve ecosystem and habitat restoration and

improvement (stewardship purposes), rather than for timber growth and yield purposes.

Comment: *Agencies should not emphasize short-term economic gain through timber harvest and grazing. Restoration work should be driven by biological assessments, not economic needs of local communities.*

Response: The core of the ICBEMP process and proposed action is to sustain and improve environmental and ecological conditions in the basin. The proposed action also works to meet the social and economic needs of people – especially those in isolated and economically-specialized rural and tribal communities – while meeting ecological and restoration goals.

The Supplemental Draft EIS, Chapter 3, Management Direction – Restoration (pages 92-124), along with Appendix 15, describe the delineation of broad-scale functional restoration priority subbasins, and the melding of those functional priorities to delineate integrated high restoration priority subbasins, including both high priority biophysical and high priority economic and tribal needs.

Both Alternatives S2 and S3 emphasized reducing short- and long-term risks to natural resources from human and natural disturbances.

The projected timber and grazing outputs in the Final EIS are estimates of the sustainable levels that could be allowed as a consequence of management direction implemented through the proposed decision for watershed and ecosystem protection and restoration. Management direction does not specify certain output levels. Rather, it describes desired ecosystem conditions.

Comment: *Broad-scale decisions on objectives and standards, as in this Supplemental Draft EIS, will not yield the same outputs as projected when actually implemented.*

Response: The modeling and projection of expected effects and outcomes of implementing the proposed action are described in detail in the Supplemental Draft EIS, Chapter 4, in various appendices, and in supporting science documents. They give the best possible estimates given current knowledge. Site-specific results will undoubtedly vary around the basin-wide or RAC/PAC averages. Fine-scale effects will be estimated during the step-down process and land use plan amendments. Over the longer term,

monitoring will provide feedback concerning the actual effects of implementation of the Final EIS, and will be the mechanism through which needed adjustments to direction may be made (the “adaptive management” process).

Comment: *Alternative S2's resource output levels fail to reflect the current public lands-related job percentages of 81 percent recreation, 9 percent timber harvest, and 1 percent livestock grazing.*

Response: As discussed in the Employment section of Chapter 2 of the Supplemental Draft EIS, there are currently an estimated 95,000 direct jobs associated with livestock grazing, recreation, timber harvest, and various forestry services on agency-administered lands in the basin (pages 191-192). There is no change forecast at the basin level in recreation use; therefore, there would be no associated changes in the current 77,000 recreation-related jobs. With only a 4 percent change in the total direct jobs, the percentage by category would change only marginally (for example, recreation would drop to about 78 percent from 81 percent).

Comment: *On Table 4-49, page 4-165, neither the range nor the units for these classifications are shown.*

Response: Table 4-49, in Chapter 4 of the Supplemental Draft EIS, is strictly a qualitative estimate of uncertainty around timber sale viability based on a combination of projected timber harvest increases, potential timber sale profitability, and sale marketability.

Comment: *We cannot find Wallowa County, Oregon, listed in Table 3 of Appendix 7. Given the nature of the county's economic structure, it would appear to be a serious omission.*

Response: Wallowa County, Oregon, is included in Table 3 of Appendix 7, page 7-20. It was inadvertently called “Walla Walla” County, but the data shown are correct for Wallowa County. The name has been corrected in the Final EIS.

Comment: *Why are the terms “rural and tribal” both used in reference to communities, rather than just “rural” or “community”?*

Response: The use of the term “rural and tribal” is done intentionally to remind managers and others of the need to keep tribal needs and concerns on an equal level with other resource, social, and economic issues.

Comment: Page 2-189 states: "Appendix 7 shows percentages of county budgets made up of Payment in Lieu of Taxes (PILT) and other revenue-sharing payments in the early 1990s. We cannot find that information in Appendix 7.

Response: The information is in the Supplemental Draft EIS, Appendix 7, Table 3 (pages 7-20) under the column titled "Federal Land Payments (%)." The definitions for five adjacent columns, including this one, were located together in one footnote. Those column definitions have been split into separate footnotes in the Final EIS for greater clarity and ease of understanding.

Comment: *There needs to be an analysis of the project on agency budgets, the U.S. Treasury, and taxpayers.*

Response: This comment is outside the scope of this EIS. The budget costs of implementation for the Forest Service and BLM have been estimated in the Supplemental Draft EIS.

Comment: *Discuss the use of alternative products to replace and/or supplement products derived from national forest lands.*

Response: This comment is outside the scope of this EIS. Such a discussion would be relevant to policies and processes broader than those to be resolved by this EIS. In addition, there would be no projected changes to be disclosed from implementation of the proposed decision.

Economic Analysis

Comment: *Where can one find a comparison of benefits (and losses) between management for an administrative unit under its current land use plan and management if ICBEMP is implemented?*

Response: Effects of the alternatives on specific administrative units, or other areas smaller than the RAC/PACs (such as a national forest, county or subbasin), cannot be measured directly because of the broad-scale nature of the analysis. Therefore, the administrative unit-level effects will have to be identified during the step-down process and as the land use plans are revised.

Comment: *Non-market values of local citizens, as well as existence or preservation values of nonresidents, should be included in the economic equation.*

Response: The text in the Supplemental Draft EIS, Chapter 2, page 189, has been clarified. It indicates that values held by local and regional residents, for environmental amenities that could be expressed in dollar terms would be included in a complete accounting of economic benefits. (The EIS discusses these types of values only in qualitative, not quantitative, terms.) The discussions in Chapter 2 recognize both economic values generated by products and services from BLM- and Forest Service-administered lands and other values, such as those associated with quality of life in the region that are held and enjoyed by local residents and rural communities.

Comment: *By law, the Forest Service must justify its resource management programs, plans, and projects on social and economic grounds. The project will not maximize net public social and economic benefits, because it does not adequately consider the wide range of social and economic benefits of unlogged forest (and also of non-forested lands not subject to livestock grazing, etc.)*

Response: There is no federal law that requires the agencies to justify their programs and projects on strictly economic and social grounds. Rather, the National Environmental Policy Act (NEPA) requires that economic and social, as well as physical and biological, effects of proposed federal actions be disclosed. In addition, the National Forest Management Act (NFMA) and its implementing regulations require that social and economic effects of implementing each alternative be considered and compared. The selected alternative is then the one determined to have the greatest "net public benefits." However, this is not an economic/social term, it is "...an expression to signify the overall long-term value to the nation of all outputs and positive effects (benefits) less all associated inputs and negative effects (costs) whether they can be quantitatively valued or not." (36 CFR 219.3) By definition, the alternative selected by the decision maker is the one that has the greatest "overall long-term value to the nation" – that is, it has the maximum "net public benefits." The Forest Service and BLM executives making this selection believe the proposed decision in the Final EIS best meets the purpose and need and has the greatest "net public benefits."

Comment: *The economic analysis is inadequate. A weighing of unquantified environmental amenities and values against economic and technical considerations, as required by National Environmental Policy Act (NEPA), was not done.*

Response: The Science Advisory Group and EIS Team used the best available information to identify the quantified and unquantified benefits and costs – physical, biological, economic, and social – for the no-action and the action alternatives, and evaluated those benefits and costs in the context of the project's purpose and need and in relationship to each other. Such a weighing and evaluation process is extremely complex for a process as wide-ranging and broad-scale as ICBEMP.

Comment: *A peer-reviewed audit of the economic analysis should be required before the project can be finished.*

Response: The development of the Final EIS and Record of Decision (ROD) has met the requirements for NEPA analysis, including input and analysis by a number of professional economists, both inside and outside the federal government.

Comment: *We ask that the agency reevaluate and reconstruct the socioeconomic analysis to include the benefits of outdoor recreation for local economies and a discussion of historically unmeasured (nonmarket) economic values of forest and wildlands recreation, which is rapidly increasing and will continue to increase throughout the foreseeable future.*

Response: The Economics Chapter (Haynes and Horne 1997) of the *Assessment of Ecosystem Components* discusses the current and projected recreation situation in the interior Columbia River Basin, including demand for various types of recreation, supply of recreation opportunities within the basin, nonmarket economic values of recreation (expressed in terms of “willingness-to-pay”), and total jobs associated with recreation activities on BLM- and Forest Service-administered lands within the basin. The supply/demand and jobs information from the *Scientific Assessment* are summarized in Chapter 2 of the Supplemental Draft EIS. Because the EIS has not adopted a formal quantified benefit-cost analysis approach, these nonmarket values are not discussed in the Supplemental Draft or Final EISs (nor are any other quantified economic benefit values, such as

timber prices). Also, because there are no changes in recreation opportunity predicted at the scale of analysis for the project area, additional discussion of potential changes in recreation benefits and impacts for local communities is not included in this document.

Comment: *The 1998 Economics Report (ICBEMP 1998) ignores the subsidies, externalities and other price distortions that encourage resource extraction.*

Response: The core and emphasis of the ICBEMP process and proposed action is to sustain and improve environmental and ecological conditions in the basin. Areas of significant aquatic and terrestrial core habitat value, along with riparian areas, are identified and protected from management activities that do not meet the objectives of maintaining and improving those habitat values. The proposed action also works toward meeting the social and economic needs of people – especially those in isolated and economically specialized rural and tribal communities – while also meeting ecological and restoration goals. The focus on meeting those goals offsets any price effects that might otherwise encourage higher levels of resource extraction.

Comment: *The Supplemental Draft EIS does not address impacts on motorized recreation, and on small Off Highway Vehicle OHV businesses that depend on public lands.*

Response: As discussed in the recreation section in Chapter 4 of the Supplemental Draft EIS, no significant changes in expected supply of recreation opportunities, as measured by changes in distribution of Recreation Opportunity Spectrum (ROS) acres, were found at the broad-scale level of analysis done for this EIS. Possible changes in road access and potential changes in access to riparian areas because of implementation of Riparian Conservation Area objectives and standards that could potentially affect motorized recreation supply and use were not modeled at this broad scale because they rely on more site- and condition-specific information. These potential changes and possible impacts on recreation use and associated businesses (of all types, including motorized/OHV) will be assessed and evaluated in more detail during the step-down process (Subbasin Review, Ecosystem Analysis at the Watershed Scale, and Forest/District land use plan revisions).

Comment: *The Supplemental Draft EIS should have included sensitivity analysis or scenarios by subbasin or RAC/PAC, varying RCA, A1/A2 subwatershed, and T watershed/habitat designations, in order to get varied ranges of outputs.*

Response: The size and complexity of the project area would have made running and evaluating any reasonable number of sensitivity analyses for the various outputs reported prohibitively expensive in additional time and cost required to complete the EIS. More of that information should be developed during the step-down process. The finer scale of analysis during step-down will provide local information that is more meaningful in evaluating further decisions for individual land use plan revisions and projects to be implemented.

Comment: *Most of the real economic benefits/effects of the proposed action are long run, occurring after the first decade, and are not analyzed or discussed. Most of the benefits that are discussed in the Supplemental Draft EIS are short-term restoration jobs and raw material to be made available to the wood products and grazing industries.*

Response: Results of the modeling done with the CRBSUM model were reported for the first and the tenth decades. The 100-year time frame was necessary to discern changes over time in ecosystems that do not adjust rapidly (fisheries, large-scale vegetative structure and patterns, and the like). The EIS discusses in various sections these long-term ecological and environmental changes as benefits – quantified in biophysical terms, but not in economic terms. The first decade effects are mostly relevant from a socio-economic standpoint and are economically quantified to the extent possible. The quantification is focused on employment, rather than benefits in terms of dollar value, because the EIS does not use a formal quantified benefit-cost analysis approach.

Comment: *No formal benefit-cost or other economic efficiency analysis was completed for the Project.*

Response: Because of the size and complexity of the project area, the values involved, and the lack of economic quantification of many of those values, any economic efficiency analysis (benefit-cost, or cost-effectiveness) would have been difficult and expensive. Many of the ecological benefits of the proposed action do not have quantified economic values associated with them, and development of such values would be expensive and controversial. It was felt that focusing economic analysis on levels of

outputs and activities and on expected effects on employment, while discussing other longer-term ecological benefits and costs in qualitative terms, would provide the most useful information for both decision makers and local communities for the basin-wide issues to be resolved, and minimize possible confusion that would likely arise from a partial quantitative economic efficiency analysis.

Comment: *It is unclear how the “economically specialized communities” were defined.*

Response: Derivation of “isolated and economically specialized communities” is summarized in the Communities section of Chapter 2 of the Supplemental Draft EIS, pages 194-196. Detailed discussion is found in the *Economic and Social Conditions of Communities* report (ICBEMP 1998).

Comment: *There are no facts supporting estimated changes (percentages and absolute numbers) in jobs.*

Response: Projections of job changes are based on historical data and relationships between levels of outputs/activities and jobs. Sources of data and methodology are described in the EIS and supporting documents. See Chapter 2 of the Supplemental Draft EIS, Employment section; Chapter 4, Effects of the Alternatives on Employment section; Crone and Haynes (2000), and Haynes and Horne (1997).

Comment: *The economic value of Animal Unit Months (AUMs) is not mentioned in the Supplemental Draft EIS, but it can't be ignored.*

Response: Because the EIS does not use a formal quantified benefit-cost analysis approach, estimates of the dollar value of AUMs were not displayed. Rather, they are shown as physical quantities. This is consistent with how other outputs and activities are reported. The analysis and evaluation did not attempt to weigh the relative economic values of one resource compared to another. Rather, the focus was on the projected degree of change from current levels, as achieved while meeting ecological and restoration goals, and on changes in associated jobs.

Comment: *The Supplemental Draft EIS does not adequately account for the total economic contribution of the forest products and other resource-based industries. For example, both direct and indirect employment effects should have been modeled. Also, direct and indirect recreation jobs were counted in the analysis, but only*

direct jobs for timber and grazing. The title of the Chapter 4 Employment section should read "Total Direct Employment."

Response: Economic contributions of resource-based industries in the basin, regionally and locally, are discussed in the Supplemental Draft EIS, Chapter 2, Social-Economic-Tribal Component section. Historical and current contributions are also discussed more thoroughly in the Economics Chapter (Horne and Haynes 1997) of the *Assessment of Ecosystem Components*. A conscious choice was made early in the analytical process by the Science Advisory Group and the EIS Team to track only projected direct employment effects, and not secondary (indirect and induced) effects. Because of the size, complexity, and number of variables involved in the project, the intent was to focus on those effects that can be best measured, and not get sidetracked into controversies about the validity of methods and results for measuring indirect and induced results. This approach was applied to all historical and projected jobs, including recreation as well as timber and grazing jobs, and projected restoration jobs. Therefore, all job information is on the same base. The Chapter 4 heading for Total Employment was modified in the Final EIS as recommended to reflect this.

Comment: "Tourism" and "recreation" are not listed as specialization sectors, unlike timber, grazing, etc.

Response: The specialization sectors were delineated based on the Standard Industrial Classification (SIC) system maintained by the U.S. Department of Labor. The SIC is used as a standard for data collection and reporting throughout the United States. There is no "recreation" or "tourism" industry defined by the SIC. Rather, those categories are composed of pieces of a variety of other sectors, primarily trade and services, but also including some manufacturing. Services associated with recreation would include such classifications as lodging, restaurant meals, and outfitter/guides. Retail trade would include such classifications as grocery stores; gasoline, oil, and other auto supplies and services; and recreation supplies, such as hunting, fishing, and camping gear. Because of this characteristic of the economic data collection and reporting structure, it is extremely difficult to break out just those portions of the economy directly related to recreation and tourism, without doing primary data collection at the local level. In addition to the high expense, this type of data collection is not practical for a large area like the interior Columbia River Basin.

Comment: Externalized logging costs were not considered in the alternatives.

Response: What are usually thought of as externalities of logging (soil compaction, sedimentation, habitat fragmentation, and the like) are controlled through objectives and standards to be applied during implementation of the proposed decision that will substantially limit these effects. In addition, site-specific requirements for implementation of timber harvest will be developed by the local administrative units to achieve ecological objectives that are more broadly stated in the Final EIS.

Timber

Comment: There is an inconsistency in the economic forecasts of timber production between the Supplemental Draft EIS and the Forest Service Roadless Area Conservation EIS.

Response: The ICBEMP Supplemental Draft EIS projects basin-wide increases in harvested timber volume in the first decade. Under the action alternatives, the projected increases over the no-action alternative (S1) are 172 million board feet for Alternative S2 and 167 million board feet for Alternative S3.

The difference between the ICBEMP Supplemental Draft EIS and the Forest Service Roadless Area Conservation EIS (Final EIS published November 9, 2000) is due to differing assumptions. The Roadless Area Conservation EIS assumes that there is no substitutable volume of timber to replace volume that is not harvested as a result of the prohibition in policy (Page 3-11 of the Roadless Area Conservation Draft EIS)

Comment: The plan does not to provide a sustained-yield analysis as required by National Forest Management Act (NFMA) and Multiple-Use Sustained Yield Act (MUSYA).

Response: Timber production estimates are based on simulations of natural disturbance and succession processes (including natural fire and vegetation growth) as well as human management of fuels and vegetation. This method is different from traditional timber scheduling models (see Table 4-36 in Chapter 4 of the Supplemental Draft EIS). Refined estimates of timber supply and sustainability need to be completed by individual national forests and BLM

districts as they adjust their land use plans. At that scale, sustained yield calculations can appropriately be made to meet legislative mandates. Until then, these initial projections provide estimates of the relative differences among the alternatives at the broad-scale.

Comment: *In order to give a true picture of the changes in timber harvest projected under the proposed action, you should have used the years prior to adoption of Eastside Screens/PACFISH/INFISH etc. as the base for comparison, rather than the years (mid 1990s on) after the effects of those actions were felt.*

You should have used average timber production over the past 5-10 years as the baseline for comparing future timber harvest levels, rather than projecting current production levels into the future. If you had done so, projections of harvest under the action alternatives would have shown a decrease, rather than an increase, from the no-action alternative.

One of the issues that has been avoided is the fact that any future declines in timber outputs would be on top of those that have already taken place. There is no analysis of the effects of continuing to reduce timber outputs.

Response: The NEPA process requires disclosure of the expected physical, biological, social and economic effects of alternatives compared to a no-action alternative. The no-action alternative describes the effects of continuing with current direction – that is, no change in direction or no new actions taken. The Eastside Screens, PACFISH, INFISH, Healthy Rangelands (for BLM-administered lands), and various Biological Opinions have all changed management direction for BLM- and Forest Service-administered lands in the project area since the early to mid 1990s. Alternative S1, the no-action alternative, reflects the continuation of this current management (along with the balance of the management direction in national forest and BLM district land and resource management plans). Comparison of the projected effects of Alternatives S2 and S3 to S1 is appropriate and meets NEPA requirements.

The modeling of the expected timber harvest levels for Alternative S1 was not a straight projection of the most recent harvest year available at the time the modeling was done. Rather, it incorporated historical harvest data for both a 10-year period (1988-1997) and a 3-year period (1995-1997) as the basis

for setting prescriptions for various forestland types prior to doing the Alternative S1 model run. This was done to lessen the variability found in harvest levels when using only one or two years' data.

Finally, the background and changes in timber harvest history are recognized as important information for understanding changes occurring in the basin, effects that have already been felt by some communities, and effects that may be felt in the future. In Chapter 2 of the Supplemental Draft EIS, the Commercial Timber Harvest and Other Forest Products, and the Manufacturing Employment sections provide this background. Additional background detail is found in the Economics Chapter (Haynes and Horne 1997) of the Assessment of Ecosystem Components

Comment: *The statement "differences in marketing practices among national forests have shown major differences in timber sale success" is misleading. We have been associated with small diameter tree removal for several years and are not aware of marketing differences.*

Response: Some national forests have developed marketing expertise in small diameter and low-value product timber sales and have a very high timber sale success. Others have not seen comparable success.

Comment: *Increasing timber harvests, but mainly with small diameter material, will increase the small diameter material in the mix at mills, making them less efficient, which they can ill-afford because of slim-to-nonexistent operating margins. Higher cost harvesting and lower value material thus will have major [adverse] impacts on timber harvest and lumber processing profitability.*

Provide an analysis of the economic viability of logging (thinning) small diameter, poorer quality material for "forest health" reasons on the scale proposed. Also analyze the effects of skidding distance and logging methodology; lack of such analysis makes the projections of timber outputs too optimistic.

Response: These issues, their potential effects on the profitability of both harvesting and mill operations, and the uncertainty this raises about the marketability of the projected timber harvests under Alternatives S2 and S3 are specifically acknowledged and discussed in the Timber Volume/Predictability and Sustainability section of the Supplemental Draft EIS, Chapter 4, page 151.

Specific logging techniques and methods are too fine-scale to appropriately be addressed by the broad-scale approach of this project. Projected timber harvest volumes used to analyze socio-economic effects of the alternatives were based not on traditional timber harvest modeling methods but rather on the broad-scale landscape disturbance and succession approach appropriate to the broad scale of the project. Refined estimates of timber supply will be determined when the proposed decision is incorporated into local land use plans.

Comment: *Past performance of administrative units in not meeting their timber harvest allowable sale quantities makes it difficult to imagine future timber sale performance achieving the projections of the Supplemental Draft EIS.*

Response: Allowable sale quantities (ASQ) for timber were generally established in land use plans that were completed prior to the adoption in the early to mid 1990s of more restrictive management direction such as the Eastside Screens, PACFISH, and INFISH in response to actual or potential listings of threatened and endangered species. Given this intervening direction, using the ASQ base established under the original plans is not a reasonable or relevant basis from which to measure performance and draw conclusions about expected future performance. There is uncertainty, though, associated with the projections of timber harvest under Alternatives S2 and S3, which is acknowledged and discussed in the Timber Volume/Predictability and Sustainability section of the Supplemental Draft EIS, Chapter 4, page 151.

Comment: *Removal of existing roads in the upland on the Kootenai National Forest will prevent achievement of the projected timber harvest increases.*

Response: The long-term objective of the proposed decision is to progress, in a staged approach, toward a smaller transportation system that can be effectively and efficiently maintained into the future with minimal environmental impact, and to progressively reduce road-related adverse effects on ecosystems. The objectives, standards, and guidelines for roads are discussed in the Road Restoration section of the Supplemental Draft EIS, Chapter 3, pages 106-108. However, no road removal decisions are made in the Final EIS. Retention of roads to meet public demand, resource management and stewardship needs, and tribal needs is recognized. This would include maintaining roads for access in areas that have been identified as in need of restoration.

Comment: *Why is there a projected increase in commercial timber harvest when the loss of large trees throughout the basin is greater than was originally thought?*

Response: The projected increase in harvest under Alternative S2 or S3 will come primarily from thinning small-diameter, lower-quality material. Objectives for vegetation management emphasize retention of large trees and old forest throughout the basin (see objectives for base level terrestrial source habitats, riparian conservation areas, A1/A2/T areas in Chapter 3 of the Supplemental Draft EIS).

Comment: *"Restoration timber sale" is just another word for "clear-cutting".*

Response: The Supplemental Draft EIS, Chapter 4, section on Factors Influencing Ecosystem Health, includes a subpart titled Timber Harvest, which describes traditional harvest methods and stewardship types of harvest. The action alternatives (S2 and S3) would use a high proportion of stewardship harvest as a restoration tool, focusing on maintaining and improving ecological functions of the forest. Stewardship harvest can be an effective tool in restoring vegetation patterns and disturbance regimes. The largest trees are more likely to remain, as are the more fire-resistant and shade-intolerant trees. Stewardship harvest often uses "thinning from below" methods to give growing space to overstory trees, reduce fuel levels, and/or remove fuel ladders. This type of harvest, or vegetation management, is not the same as clear-cutting harvest methods.

Comment: *The statement in Chapter 2, page 183 of the Supplemental Draft EIS that says part of the reason for the decline in timber harvests from federal lands in the basin in the 1990s was a softening of demand for timber is incorrect. There has been no softening in demand for timber, lumber, pulp or paper.*

Response: The statement in Chapter 2, page 183 has been clarified to read "...from softening export demand for timber..." It is true that overall U.S. demand for wood products has increased, but export demand—which has indirect effects linking back to demand for national forest timber harvest—declined during the Asian economic recession. The increased U.S. demand has been met from increased imports and from increased harvests on private land.

Comment: *Increasing timber harvest in Eastern Oregon by 100 percent over 1998 levels (approximately 240 million board feet) and in Idaho by 51 percent over 1998 levels (approximately 200 million board feet) will significantly and adversely affect forest ecosystems, water quality and fish habitat.*

Response: The reasons and need for vegetation management (primarily thinnings, prescribed fire, and fuels reduction) to improve ecosystem and habitat health and resilience, and to reduce the risks of severe wildfire, are discussed in Chapter 2 of the Supplemental Draft EIS. The management objectives and standards designed to achieve ecosystem restoration and protection goals are described and discussed in Chapter 3. The expected environmental and ecological consequences of the proposed action are described in Chapter 4. The long-term ecological benefits of the proposed action are expected to significantly improve ecological resilience and integrity, outweighing any short-term risks, rather than experiencing adverse impacts to forests, water, and fish.

Comparing projected timber harvests to 1998 harvest levels is misleading. 1998 saw the lowest timber harvest in these areas in at least 15 years. National forest timber harvests for 1995-1997 averaged somewhat over 300 million board feet in Idaho, and about the same in eastern Oregon. In addition, the type of material that will be harvested will be significantly different than in the past. Much of the volume taken through restoration work would be lower-quality, small-diameter material, rather than the large mature trees of past harvests.

Comment: *Pulp and paper manufacturing is not dealt with, either in Chapter 2 or Chapter 4. This is a serious omission.*

Response: In the West, this industry uses mill residues and chips, and while mill residues may decline with a decline in federal timber harvest, the supply of chips and fiber logs is abundant. See Haynes (1999) for a review of chip markets and for price evidence suggesting there are abundant supplies of chips in the interior Columbia River Basin. With the implementation of the proposed action, it is likely the supply of fiber logs will increase because of the small-diameter, lower-quality wood to be removed as part of forest restoration and fuels reduction. (See the Supplemental Draft EIS, Chapter 4, Predictability and Sustainability of Timber Harvest Volume Levels.) In addition, the Resource Planning Act

(RPA) timber assessment documents showed that changes in federal timber programs were not found to impact the pulp and paper industry.

Livestock Grazing

Comment: *What does "short term effects on the ranching industry" mean in terms of years?*

Response: "Short-term effect" is considered to be between 5 and 10 years. However, the time in years depends on how rapidly new allotment management plans are completed, how fast rangeland conditions respond favorably to new management direction, and how long it takes operators to adjust to this new direction. It could be reasonably expected as minimum of 5 to 10 years, possibly up to 15 years, varying by area and site-specific conditions.

Comment: *How do AUMs (grazing use) from the last decade compare to those shown projected for Alternatives S1 to S3?*

Response: Figure 2-19 in Chapter 2 of the Supplemental Draft EIS shows historical authorized Animal Unit Months (AUMs) on BLM- and Forest Service-administered lands in the project area. The 1991-1997 average was just over three million AUMs—about the same as projected for continuation of current management under Alternative S1, the no-action alternative. Alternative S2 would have an estimated decrease of about 300,000 AUMs, and Alternative S3 would decrease by almost 350,000 AUMs.

Comment: *The ICBEMP illegally overrides the Taylor Grazing Act, which authorizes the current grazing levels.*

Response: The Taylor Grazing Act of 1934 established and authorized allotment-based grazing (among other provisions) but did not establish actual grazing levels. Grazing levels are determined by site-specific allotment management plans, developed by the administering agency through the National Environmental Policy Act (NEPA) process, with stakeholder involvement.

Comment: *Reducing grazing on federal lands may result in over-grazing on state and private lands.*

Response: This is a possibility, but not a responsibility of the federal agencies. The federal agencies are required to manage the lands they administer to meet law and regulation, including maintaining and

restoring ecosystem health and integrity for a wide variety of species and uses, including protection of threatened and endangered species.

Comment: *The Supplemental Draft EIS calls for an across-the-board 10 percent cut in livestock grazing in order to achieve some standards. Are projected reductions in grazing with or without rangeland improvement investments? Evidence in the Supplemental Draft EIS does not show that the projected reductions in grazing will result in achieving the recommended standards.*

Response: The projected authorized Animal Unit Months (AUMs) (Table 4-34 in Chapter 4, of the Supplemental Draft EIS) are an estimate of the sustainable grazing that could be allowed as a consequence of management direction implemented for watershed and ecosystem protection and restoration, including rangeland improvement investments. Management direction does not specify a reduction in grazing levels. Rather, it describes desired rangeland conditions. Therefore, changes in authorized AUMs are indirect consequences, rather than prescribed outcomes, of this direction. The suite of management objectives and standards for management of rangeland and livestock grazing, and the projected effects on grazing levels, represent the best knowledge and expertise of the rangeland scientists, managers, and landscape ecologists. As discussed in Chapter 4, page 148, implementing comprehensive, landscape-scale livestock and grazing management practices will introduce a certain amount of uncertainty in forage and livestock production. Monitoring of results will allow necessary adjustments to be made over time to meet the desired objectives.

Comment: *No mention was made of potential changes in demand for beef when discussing variables that may affect the structural nature of the livestock industry.*

Response: Wording has been added in the Livestock AUMS/Production Levels section in Chapter 4 to include changing demand for beef as a variable that can affect the structural nature of the livestock industry.

Comment: *If demand and/or prices for beef increase, could BLM- and Forest Service-administered lands be managed more intensively for livestock grazing to increase supply?*

Response: The intensity of grazing that can take place is a function of the objectives and standards that are implemented to meet ecosystem protection

and restoration goals. At the broad scale of this analysis, the amount of grazing projected basinwide and by RAC/PAC areas is all that could take place while still meeting protection and restoration goals. The U.S. per capita consumption of beef has remained fairly constant at around 67 pounds over the past decade, after declining from a 1976 high of nearly 95 pounds (Texas Cattle Feeders Association 2000). Based on this statistic, there appear to be no major ongoing shifts in the U.S. beef market demand at this time.

Special Forest Products

Comment: *Special forest products are not addressed in the Supplemental Draft EIS. Effects of alternatives on special forest products should be estimated.*

Response: Special forest products are discussed briefly in Chapter 2, page 185. As discussed in Chapter 4, page 155, effects of the alternatives on various special forest products were not estimated for the broad-scale analysis of the Supplemental Draft EIS. Because knowledge of special forest products depends on site-specific information, the effects of proposed management activities on special forest products would be analyzed at the fine scale during the step-down process.

Mining and Minerals

Comment: *There is no support for the Supplemental Draft EIS conclusion that there will be no impacts on mining from implementation of the action alternatives.*

Response: Effects of the Supplemental Draft EIS alternatives on permitted mineral and energy operations are inferred from management direction that could hinder potential operations and are displayed on page 155, Chapter 4 of the Supplemental Draft EIS. None of the alternatives would change valid existing rights for mining.

Comment: *The plan incorporates basin-wide standards that will apply to mining that are redundant to, and less flexible than, existing protections.*

Response: The standards designed to protect important fish populations in aquatic A1 and A2 subwatersheds (Chapter 3 of the Supplemental Draft EIS, pages 132-137) and source habitats in Terrestrial T watersheds would be more restrictive in some cases than existing forest plans and BLM land use plans.

Comment: The Supplemental Draft EIS does not adequately analyze mineral and mining adverse impacts, including the socio-economic effects of mineral mining. The proposed action will perpetuate significant adverse impacts on mining exploration and development and on families dependent on mining.

Response: Effects on mineral and energy exploration and development were not estimated for the EIS because of the broad-scale nature of the analysis. Potential effects can only be inferred from management direction that could affect potential operations.

For example, standards and guidelines to protect aquatic and riparian areas already in place on most Forest Service- and BLM-administered lands, as well as additional aquatic and riparian protection under Alternatives S2 and S3, may increase the cost of mining and energy developments by limiting the location (or requiring relocation) of mining operations and facilities (such as mill buildings, settling ponds, sanitary and solid waste structures, and overburden piles.) Alternatives S2 and S3 may require relocating access roads or changing mine design and operation to avoid unacceptable impacts to riparian areas.

More potential site-specific effects on mining operations and related socio-economic effects would be identified through finer-scale analysis during the step-down process.

Comment: ICBEMP makes only the most modest acknowledgment of mineral mining. As a consequence, the EIS does not comply with the project's mandate to disclose interrelated actions and cumulative effects using scientific methods in an open public process.

Response: Broad-scale effects on mineral and energy exploration and development were not estimated for this EIS and can only be inferred from management direction that could affect potential operation (discussed on page 155, Chapter 4 of the Supplemental Draft EIS. The surface-disturbing aspects of minerals operations were considered to be fine scale; individual impacts would be addressed at the project planning level. The potential cumulative and Incremental effects of an activity when added to other past, present and reasonably foreseeable future actions are disclosed in the Supplemental Draft EIS, Chapter 4, page 6.

Comment: All BLM-and Forest Service-administered lands should be withdrawn from mineral entry and exploration.

Response: Completely eliminating mineral entry and exploration from lands in the project area would not be consistent with the purpose and need for the project, which provides for sustainable and predictable levels of products and services those federal lands.

Hydroelectric Power Generation

Comment: Hydroelectric power generation is not considered to be adequately discussed, particularly regarding hydropower relicensing. Some respondents want more clear and strict guidelines for complying with relicensing regulations; others are worried that Riparian Conservation Areas may infringe on the rights and conditions of existing hydropower projects.

Response: Development of hydroelectric power generation facilities is under the authority of the Federal Energy Regulatory Commission (FERC). The Forest Service and BLM have certain authorities and responsibilities under the Federal Power Act to submit recommended terms and conditions to FERC that will be part of the hydropower site license, if approved. These terms and conditions will be designed to achieve aquatic and Riparian Conservation Area (RCA) objectives and standards to the greatest extent possible, under existing valid rights and legal authorities (see RCA Management Direction discussion in the Supplemental Draft EIS, Chapter 3, page 72-74). The terms and conditions submitted by the agencies will vary based on the specific on-and off-site mitigation, restoration, and enhancement opportunities associated with each hydropower development. Such terms and conditions are likely to raise the development and operating costs of proposed (or relicensed) hydropower plants, potentially affecting their financial profitability or viability.

Effects on hydroelectric power generation were not estimated for this EIS because the broad-scale analysis does not capture the fine-scale nature of specific hydro power sites. Estimates of more site-specific effects (including related socioeconomic effects) will be identified through fine-scale analysis during the step-down process.

Comment: *The Supplemental Draft EIS does not address non-recreation special uses, such as electronic sites, water supply lines, and the like.*

Response: Effects on non-recreation special uses were not estimated for this EIS because of the broad-scale analysis—much too broad to capture the fine-scale nature of specific electronic sites, water supply lines, electrical transmission lines, and the like. Estimates of more site-specific effects (including related socioeconomic effects) would be identified through finer-scale analysis during the step-down process.

Predictability and Sustainability

Comment: *The Supplemental Draft EIS does not provide predictable, sustained flow of economic benefits. It is uncertain whether outputs will be sustainable, or even predictable. This uncertainty and low economic margins mean the projected harvest increase is an illusion.*

Response: The Supplemental Draft EIS, Chapter 3, Social-Economic-Tribal Component, Description and Management Intent: Overall section, (page 86), has been clarified to discuss predictability as well as sustainability of levels of goods and services produced from lands administered by the BLM and Forest Service in the project area. The language of Objective B-O55 has been similarly changed to bring it into consistency with the project purpose and need (Chapter 1).

Discussions of expected output and activity levels, and the assumptions behind their projection, are found in Chapter 4, Social and Economic Considerations, Levels of Outputs and Management Activities Expected from the Alternatives. Discussions of uncertainty surrounding projected grazing and timber harvest levels, and for grazing- and timber-specialized communities are discussed, respectively, in the Levels of Outputs... and the Effects on Communities sections of Chapter 4.

Comment: *Discuss the economic tradeoffs associated with nearly every resource management decision.*

Response: Socio-economic tradeoffs are discussed in a subpart by that title in the Social and Economic Considerations, Cumulative Effects section of Chapter 4 (pages 171-172) of the Supplemental Draft EIS.

Comment: *It is unreasonable to expect that entrepreneurs will risk major investments in isolated rural communities without certainty and predictability of harvest flows.*

Response: A key element of the purpose and need of the proposed action is to support social and economic needs of peoples, cultures, and communities, and to provide sustainable and predictable products and services from Forest Service- and BLM-administered lands. Harvest volumes from the proposed action are projected based on meeting ecological restoration and protection goals in the basin, including habitat maintenance and protection for threatened and endangered species. Therefore, much of the uncertainty and volatility that surrounded timber harvest levels during the 1990s should be significantly reduced.

There are other sources of uncertainty, however, associated with the projected timber harvests that are discussed in the Timber Volume subpart of the Levels of Outputs and Management Activities section of Chapter 4 of the Supplemental Draft EIS. Although desirable, it is rare in any business endeavor that a certain level of product demand, or of supply of inputs, is guaranteed for any significant period of time. While the goal of the agencies is to reduce past levels of uncertainty, there can be no guarantee of eliminating uncertainty altogether.

Employment and Jobs

Comment: *Put people to work doing thinning (and logging) to restore forests.*

Response: Between 1,970 and 2,675 restoration-related jobs per year are expected to be created in the first decade with implementation of the proposed decision. These jobs would be in forest or rangeland restoration work, or prescribed fire and fuels treatment (see Supplemental Draft EIS, Chapter 4, Tables 4-45 and 4-46).

Comment: *Is the 20 percent adjustment factor for grazing-related employment up or down?*

Response: The grazing response coefficient is adjusted upward by 20 percent to reflect that a reduction or increase in federal authorized Animal Unit Months (AUMs) would have a greater effect because of the seasonality of grazing allotments – that

is, a larger increase in jobs if AUMs are increased, and a greater reduction in grazing-related jobs if federal AUMs are decreased.

Comment: Does “recreation” or “tourism” account for the 81 percent of jobs associated with recreation activities on BLM- and Forest Service-administered lands?

Response: There was no differentiation made between recreation-related (local resident activities) and tourism-related (nonresident activities) jobs. The Science Team found in the original recreation assessment work that there was little differentiation in recreation activities engaged in between the two groups. Because of the scope of this project, it was very difficult to make a differentiation between recreation and tourism, because of the problems of delineating scale for what would be “resident” and what “nonresident.”

Comment: Do projected employment figures include government employment or employment generated by agency program management expenditures or from federal revenue-sharing?

Response: No. Employment from all those sources was considered indirect or induced employment and therefore is not included in the projected employment figures.

Comment: The methodology to estimate timber-related employment is good only if log imports are equal to log exports, which seems unlikely.

Response: This comment is largely not applicable for the interior west. The job impacts would be overstated for logs that are harvested in the basin and sent outside the project area for processing or export. However, the net effect of log trade was assumed to be minor, as data on log flows suggest that almost all logs are processed locally (within the project area).

Comment: The timber direct jobs multiplier (7.75 direct jobs per million board feet harvested) has no foundation in Chapter 2 timber harvest data.

Response: Although not shown directly in the Supplemental Draft EIS, the direct jobs multiplier can be derived from the information in Chapter 2, pages 183-184 and page 191. More detail, and a more direct correlation, can be found in the Economics Chapter (Haynes and Horne, 1997) of the Assessment of Ecosystem Components.

Comment: The intent of the proposal to target management activities to communities appears to disconnect the value of conservation work from the skilled workforce that can perform it. A more effective view would connect skilled workforces with needed restoration work.

There needs to be a better plan for restoration work that will be authorized and carried out. Just encouraging the hiring of locals is not enough.

Response: The intent of making contracts for services such as restoration work as accessible as possible to local firms and individuals rests on the agencies' belief that “...participation of the local workforce in management activities on nearby Forest Service- and BLM-administered lands is important to many rural community economies. In addition to providing local jobs and income, such participation supports traditional occupations and cultures, and gives communities a stronger sense of involvement with neighboring [agency-administered] lands...” (see Objective B-O56 and discussion). If sufficient skills are not available locally, the agencies will collaborate with and support efforts by state, county and local entities to develop a local pool of those skills. In the interim, the necessary skills will have to be sought outside the local area.

Also, see Objectives B-O55 and B-O64 in the proposed decision, which encourage and highlight the production of goods and services from agency lands, within the capabilities of ecosystems, in the process of managing to meet ecological restoration and protection goals.

Comment: Please justify the creation of 4,000 new agency jobs through the preferred alternative.

Response: This is an inaccurate interpretation of the Supplemental Draft EIS. The expected new jobs are associated with projected harvesting and processing of wood products, forestland and rangeland restoration activities, and prescribed fire and fuels management activities in the private sector. It is expected that most of these jobs would be with private companies buying timber sales, or contracted to do the needed restoration and fire/fuels work. The intent is to work through the private sector, not to increase government employment.

Comment: There is no assurance that replacement industries such as restoration will mitigate direct and indirect economic impacts of dwindling federal timber.

For instance, there is no information on payroll impacts, which, because of much higher than average wages, affects the forest products industry disproportionately, especially compared with recreation. Job-for-job replacement will have serious impacts on local economies.

Response: When looking at specific woods products manufacturing jobs versus specific recreation-related service jobs, disparities will be found in hourly wages. However, when examined at the community level, net effects of income disparities between individual jobs tend to decrease. Many people argue that a decline in timber jobs, even if offset in actual numbers by recreation jobs, will lead to a total reduction in income for the community, and a consequent negative impact on the local economy. The Economic Chapter (Haynes and Horne 1997) of the *Assessment of Ecosystem Components* found little evidence to support this position. As discussed in the Communities section of Chapter 4 in the Supplemental Draft EIS, this may be the case for some communities with low socio-economic resiliency. However, evidence gathered by the Science Team showed that in many cases there is little long-term overall net adverse effect on the local economies because of growing populations – a condition found throughout the basin – and new jobs created not only in the recreation sector, but also in other economic sectors. The *Economic Impact of Preserving Washington's Roadless National Forests* (Power 2000) report supports that conclusion for rural counties in Washington State.

Comment: *The claim that the number of jobs will increase with the shift to restoration is misleading without a discussion of the quality of those jobs and their ability to provide a living wage. What kinds of jobs are the 3900 being created? Will they support existing economies? Will restoration jobs be family wage, year-round, and sustainable?*

Response: The types of restoration jobs and the income associated with those jobs are discussed in Chapter 4, pages 159 and 161 of the Supplemental Draft EIS. Many resource-related jobs are less than year-round because of weather and other seasonality factors. This would likely be the case with many of the jobs created, particularly the restoration and fire/fuels jobs. However, the degree to which the jobs are less than year-round will depend heavily on area-specific factors – primarily whether needed work at lower elevations can be done during winter months when work at higher elevations is not accessible. Because high levels of restoration work, including

prescribed fire and fuels reduction, are proposed for the first decade, these jobs are likely to be sustainable for 10 years, if not longer.

Community Impacts

Comment: *Small restoration service contracts will not be sufficient to sustain local resource-based communities, and the proposed expenditures on restoration will not offset lost income from harvest on federal lands.*

Response: As the study of communities in the basin by Harris, Brown, and McLaughlin (1996) showed, the economies of communities that are economically specialized and that appear to be resource-dependent are often more complex than perceived. The projected restoration work and associated jobs are not intended to be the sole source of assistance for holding local economies together. The intent is that such work will supplement existing economic structures and help sustain communities during transition from economically specialized to more diverse economies.

Comment: *The economic restoration priorities map (3-98) implies we want to restore local dependence on boom and bust economic cycles of the resource extraction sector. Instead, we should be offering economic transition packages to these areas.*

Response: The proposed action is intended to help sustain communities during transition from economically specialized to more diverse economies. It is not intended to discourage or mask the need for economic diversification or other economic development efforts in economically specialized areas.

Comment: *Considering communities that are dependent on resource extractive industries, the ICBEMP process should consider alternatives that provide for massive retraining and education for these individuals, and economic development plans to develop industries that will sustain these communities.*

Response: Along with making available goods and services from public lands (within ecosystem capabilities), and focusing restoration priority work near communities that are less economically diverse and more economically associated with goods and services from the public lands, the proposed action includes objectives for the BLM and Forest Service to collaborate with other federal, state, county, local and tribal governments and other entities to foster and support

local economic development (see Objectives B-O59 and B-O63 in Chapter 3). This could include training, as well as other programs and policies developed by appropriate governmental or other organizations, to bring about a diversification of industry and workforce skills.

Comment: *Directing economic activity to less economically diverse rural and tribal communities may have the effect of diverting local energy away from longer-term diversification efforts.*

Response: Directing economic activity to less economically diverse communities is just part of the socio-economic transition strategy, which also includes a suite of other objectives designed to foster and support local economic development, in collaboration with other federal, state, county, local and tribal governments and other entities (see Chapter 3, Support Economic and Social Needs of Communities and Cultures).

Comment: *If drastic and widespread economic impacts on isolated and economically specialized communities will be created, adopt mitigation measures in the ROD.*

Response: Chapter 4 of the Supplemental Draft EIS contains discussions of potential effects on communities (supplemented by *Economic and Social Conditions of Communities* [ICBEMP, 1998] report), socio-economic resiliency, and quality of life. However, effects of the alternatives on specific local communities, businesses, or other areas smaller than the RAC/PACs (such as a county or subbasin) cannot be measured directly because of the broad-scale nature of the analysis. In general, as discussed in Chapter 4, the projected effects on isolated and economically-specialized communities are not expected to be "drastic and widespread." The objectives in Chapter 3 to support the economic and social needs of communities are designed to bring resources to bear on those communities that, during the step-down process and finer-scale analyses, are found to be most in need of assistance during the transition to more diverse economies.

Comment: *Log haul and commuting patterns may mean that logs harvested will not benefit local economies.*

Response: This is recognized in the Supplemental Draft EIS in the Chapter 2 discussion of timber harvest background and trends (pages 183-184) and

in the Chapter 4 discussion of wood products manufacturing-specialized communities (page 164).

Comment: *The Forest Service does not understand the economic dependency of communities and other industries, including recreation, on the timber, mining, and grazing industries. The National Environmental Policy Act (NEPA) process requires that a cumulative socio-economic study be done.*

Response: The economic "dependence" of communities and affected industries is discussed in the Supplemental Draft EIS, Chapter 4, Social and Economic Considerations, Effects on Communities section. Cumulative effects are discussed in the section titled "Cumulative Effects."

Comment: *There is inadequate provision for sustained growth and stability of resource-dependent industries. No viable mitigation is proposed.*

The Supplemental Draft EIS does not disclose how it intends to support or help communities. It does not recognize the importance to rural communities of managing public lands in the basin. Little or no assurance is provided to local communities that policies will assist them in being more economically resilient or enhanced.

Projected low timber harvest levels will not be able to sustain many timber-dependent communities and the mills that support them. Timber company facilities, workers, and their communities will be harmed if the selected alternative prevents the Forest Service from providing "a continuous supply of timber" as called for in the Organic Administration Act of 1897.

Response: A key element of the project's purpose and need is to support social and economic needs of peoples, cultures, and communities, and to provide sustainable and predictable products and services from Forest Service- and BLM-administered lands. However, the proposed action does not attempt or intend to maintain resource-dependent industries at past activity levels. With the need to protect threatened and endangered species under the Endangered Species Act, to restore ecosystem function and health, and to reduce the threat of severe wildfire, it is not possible to continue with business as in the past. Sustainable and predictable levels of goods and services can only be provided if the long-term ecological integrity and ecosystem health is maintained.

Achievement of this goal may mean that some communities will not be enhanced and may become less resilient. However, the proposed decision works to prevent sharp declines in resource-dependent industries over the next decade, while still attaining the desired ecological objectives. Thus, basin-wide, authorized AUMs and associated jobs are expected to decline by 10 percent and timber volume available for harvest in the first decade is expected to increase by about 20 percent. The intent – through several avenues, including restoration work focused to the degree possible near communities in need of economic stimulus, as well as collaboration with other federal, state, local and tribal governmental entities to foster economic development – is to help sustain communities during transition from economically specialized to more diverse economies. Chapter 4 of the Supplemental Draft EIS also contains discussions of potential effects on communities (supplemented by the *Economic and Social Conditions of Communities* [ICBEMP 1998] report), socio-economic resiliency, and quality of life.

Comment: *The Supplemental Draft EIS does not consider how the proposed shift in land management from productive uses to preservation and restoration to natural conditions will affect small businesses in the project area, which have the smallest margin for adaptation to change. The adverse impacts of proposed grazing reductions on ranchers' cash flow and financing also are not discussed. Revise the Supplemental Draft EIS to include accurate estimates of social and economic impacts at the individual community level.*

Response: Effects of the alternatives on specific local communities, businesses, or other areas smaller than the RAC/PACs (such as a county or subbasin) cannot be measured directly because of the broad-scale nature of the analysis. Determining community-level impacts would require specifying management objectives down to the local level. The Secretaries of the Interior and Agriculture, in a letter to members of Congress in 1998, directed the project to focus for the Supplemental Draft EIS on resolving a limited number of broad-scale issues at the basin level, while allowing flexibility for other issues to be dealt with at local (fine-scale) levels. Therefore, the community-level effects will have to be identified during the step-down process and as local land use plans are revised. The Supplemental Draft EIS does discuss, without community-by-community specifics, the potential effects of the alternatives on agriculture

(grazing) specialized communities and wood products manufacturing (timber) specialized communities, as well as the potential effects of restoration and prescribed fire/fuels management activities on communities (Chapter 4, Social and Economic Considerations, Effects on Communities).

Comment: *The assessment of negligible effects on jobs and income from projected reductions in grazing is false, at least for the Upper Snake River RAC. A 10 to 18 percent reductions in grazing in parts of Idaho will have greater impacts on people (and the environment) than implied by the Supplemental Draft EIS.*

The 249 communities that depend on grazing cattle on public lands are most at risk. Will the loss of 112 to 125 grazing jobs be ranch employees, or will it shut down ranches? I am concerned that the 11 percent decline in ranch jobs will mean I won't be able to choose ranching for my livelihood.

Response: Projected reductions in authorized Animal Unit Months (AUMs) and associated jobs in Idaho range from 1 percent in the Upper Columbia-Salmon-Clearwater RAC to 18 percent in the Upper Snake River RAC. While the Upper Snake River RAC has 52 grazing-specialized communities (See Chapter 4 of the Supplemental Draft EIS, Table 4-48), only 3 of these are isolated. Non-isolated communities are generally able to manage change better than isolated communities, especially those isolated communities that have few other local businesses and experience high unemployment rates (see the Supplemental Draft EIS, Chapter 4, Potential Effects on Agriculture [Grazing] Specialized Communities).

It is projected that under Alternative S2, fewer than 50 grazing-related jobs would be lost in the Upper Snake River RAC. On average, this is about one job per grazing-specialized community. A job lost is always a major event for the individual holding that job, as well as to his or her family. There is no intent to downplay losses to individuals. But at the community level, loss to the local economy will have a much smaller overall impact, particularly in the non-isolated communities. At the broad scale, the loss would be less of an impact on the larger economies. At the scale of this analysis, it is not possible to predict whether those jobs projected to be lost in the grazing industry would be ranch hands or if an entire operation may be affected.

Comment: *Use of private incentives with restoration will have positive community effects (as opposed to negative effects and wasted funds without private incentives).*

Response: Input of innovative approaches for efficient and effective approaches to implementing the projected restoration work is encouraged, and should be given to local and regional BLM and Forest Service staffs during the step-down process.

Comment: *Concentration on long-term protection of environmental amenities in local areas will provide greater long-term benefits to communities than focus on short-term profits.*

The Supplemental Draft EIS says that the projected increase in timber volume from the proposed action is needed to create jobs or otherwise provide for community stability, in contrast to the 1996 "Summary of Scientific Findings." There is no documented link between a sustained timber flow and community stability.

The ICBEMP prescription for more logging to sustain 'timber-dependent' communities is not in the best interest of those communities, but of corporate special interests.

Response: The core of the ICBEMP process and proposed action is to sustain and improve environmental and ecological conditions in the basin. The proposed action also works hard to meet the social and economic needs of people – especially those in isolated and economically-specialized rural and tribal communities – while meeting ecological and restoration goals.

The intent – through several avenues, including restoration work focused to the degree possible near communities in need of economic stimulus; making available goods and services from public lands within ecosystem capabilities; as well as collaboration with other federal, state, local and tribal governmental entities to foster economic development – is to help sustain communities during transition from economically specialized to more diverse economies.

Comment: *Mitigating effects of reduced economic activity by running assistance programs to local and rural economies in transition has proven to be ineffective as shown in the wake of the Northwest Forest Plan.*

Response: The Northwest Economic Adjustment Initiative (NWEAI) was designed to channel assistance of various types from a broad range of federal agencies to communities and individuals adversely

affected by declines in federal timber harvest levels within the range of the northern spotted owl (western Washington and Oregon, and northern California), after adoption of the Northwest Forest Plan. Coordination has taken place among the federal agencies, three state governments, tribes, and local governments to implement the NWEAI, which has been a complex and challenging task. While not fulfilling all of the original expectations, it has achieved a remarkable number of successes in terms of funneling federal assistance to communities, providing retraining to displaced timber workers, and filling natural resource restoration-related jobs. For assessments and summaries of the successes and challenges of the NWEAI since 1994, see Christensen et al (1999); Raettig and Christensen (1998); Regional Community Economic Revitalization Team (1998); and Pipkin (1998).

Comment: *Effects on local recreation expenditures by local employees of resource industries, and negative effect on local recreation spending if they lose their jobs, should be analyzed.*

Response: The Social Chapter (Haynes and Horne 1997) of the *Assessment of Ecosystem Components* found that recreation by local residents involved almost all the same activities as recreation by non-residents. Thus, support for local recreation businesses comes from both groups. An implicit assumption of this comment is that loss of timber or other resource-related jobs will lead to a permanent loss of income to the community, primarily through depopulation, or people moving out. McCool and Haynes (1996), in their development of population projections for the basin, did not find this to be the case. In fact, the fastest growing areas were those with ample recreation opportunities that were attracting immigration, leading to more people and more recreation-based jobs. In a more recent study of counties in eastern Washington State, Power (2000) found a similar phenomenon of increasing populations and expanding economies in counties that have also experienced substantial declines in national forest timber harvests since the late 1980s.

Economic Diversity and Resiliency

Comment: *The Supplemental Draft EIS does not reflect the transition away from a timber-based economy and the resiliency of the rural communities. Rural counties have expanded since 1988, despite a 70 to 90 percent decrease in federal timber harvest (Power 2000).*

Unemployment in most rural communities in the Basin has dropped or remains unchanged since the high federal timber sale levels of the 1980s.

Response: The Economics Chapter (Haynes and Horne 1997) of the *Assessment of Ecosystem Components*, the *Economic and Social Conditions of Communities* report (ICBEMP 1998), and the Supplemental Draft EIS all recognize that, with a few exceptions, most counties in the basin have experienced increases in population, employment, and income. In counties not including, or not adjacent to, larger cities, unemployment rates generally continue to be higher than state averages, and per capita real income is generally lower than state averages. This is primarily because of structural differences between more rural and more urban economies.

Positive reports on population, employment and income at the county level (for example, the Economics Chapter (Haynes and Horne 1997) of the *Assessment of Ecosystem Components and Power* (2000) cannot be assumed to automatically hold true for individual communities within those counties, especially those that are isolated and economically specialized. Overall increases in employment cannot be assumed to apply across all economic sectors. As economies transition and diversify, as has been happening in the basin, typically there will be job losses in some sectors, such as wood products manufacturing, while gains are made in other sectors, such as services and trade. Overall per capita income at the county level may rise (Power 2000), but this may mask losses in individual communities or economic sectors. (See Effects on Communities section, Chapter 4 of the Supplemental Draft EIS.)

Comment: *The statement on page 4-161 of the Supplemental Draft EIS is inaccurate: "In general, Forest Service and BLM land use decisions have little influence on factors important to socio-economic resiliency."*

Response: The referenced sentence has been clarified in the Final EIS. It should have read: "In general, Forest Service and BLM land use decisions have little influence *basin-wide* on factors important to socio-economic resiliency." While this statement is true basin-wide, Forest Service and BLM land use decisions can affect factors that make up socio-economic resiliency, especially at the community level. The Supplemental Draft EIS acknowledges this in the Chapter 4 discussion on cumulative effects, on pages 168-169.

Comment: *We find many errors in classifying rural towns: for example, Leavenworth, Washington, is no longer a timber dependent community, nor is Chewelah, Washington. Twisp and Winthrop, Washington, are listed as "high" and "very high" for wood products, but the last sawmill has been gone for 10 years.*

Response: The potential for errors in classifying towns is recognized in the report, *Economic and Social Conditions of Communities* (ICBEMP 1998). A sidebar titled "Clarifying the Data Attributes" on page 10 notes that the employment data on which the specialization indices are based uses projections of information from the early 1990s. It is also recognized that economic conditions are changing rapidly in the basin. Although these data limitations exist, the estimates of potential effects at the community scale provided an important component to the social and economic effects analysis.

Comment: *Population density should not be equally weighted with economic and lifestyle diversity factors when calculating the socio-economic resiliency index. Higher population densities can also produce undesirable effects in communities (noise, pollution, traffic, and the like).*

Response: More detail about the development of the socioeconomic resiliency index used can be found in Horne and Haynes (1999). Assumptions in any methodology are always subject to debate. However, the resiliency index is calculated using population density at the county level, not the community level, which includes all rural and urban, or incorporated and unincorporated, populations. Thus, it would be difficult to find a consistent weighting for population versus the other two factors making up the index.

Relative Values

Comment: *Non-market environmental amenities and high quality living environments are very important to traditional resource-dependent communities in terms of supporting jobs/income/growth, as well as attracting other people and economic activity to the area (Power 2000).*

Response: This is acknowledged and discussed in a number of places in the Supplemental Draft EIS (see the Social and Economic sections of Chapters 2 and 4) and supporting documents. McCool and Haynes (1996), in their development of population projections for the basin, found that the fastest growing areas in the basin were those with ample recreation

opportunities that were attracting immigration, leading to more people and more recreation-based jobs. This point is also discussed in McCool et al. (1997).

Comment: *There is an inappropriate focus on social and economic aspects at the expense of ecological integrity of public lands. Intact functioning ecosystems will provide long-term benefits far greater than the short-term value of commodity extraction. Recreation opportunities and existence of roadless areas in the basin are approximately 10 to 20 times more valuable than timber and grazing combined. In spite of this, the agencies continue to emphasize short-term economic gains through timber harvest and grazing.*

Response: The core of the ICBEMP process and proposed action is to sustain and improve environmental and ecological conditions in the basin. This includes the protection and restoration of sustainable ecosystem processes and functions, and reflects the agencies' strong conviction that ecosystem health and ecological integrity play very important roles for all parts of the environment—physical, biological, social, and economic.

Roadless areas provide the foundation of many of the A1 and A2 subwatersheds and T watersheds, which are generally protected from new road construction, at least for the first decade. However, as called for in the purpose and need statement in Chapter 1 of the Supplemental Draft EIS, the proposed action also works hard to meet the social and economic needs of people—especially those in isolated and economically-specialized rural and tribal communities—while meeting ecological and restoration goals.

Value may be measured in many different ways. It is important to have information about relative values, whether they be willingness-to-pay (prices or price proxy) values, values associated with jobs and income, values associated with various lifestyles, cultural and traditional values of various peoples, or however else value may be measured. But a greater relative value (measured in just one of several ways) of one type of use of public lands over another does not mean that the “lesser-valued” use should therefore be eliminated completely.

Comment: *This project does not adequately discuss the impacts of proposed activities on all the many significant values of roadless areas. For example, the Supplemental*

Draft EIS does not disclose the social and economic contributions of unlogged and unroaded forests.

Response: Discussions on natural areas, which are managed for minimal human disturbance, have been added to the Final EIS in Chapter 2 and Chapter 4. These discussions outline the values (including social and economic) associated with these typically unlogged and unroaded areas.

The discussion of recreation supply in the Land Ownership and Major Uses section of Chapter 2 of the Supplemental EIS talks about the large amounts of primitive and semi-primitive recreation opportunity provided in the basin through wilderness and similar areas, and the comparative advantage that gives the region over other parts of the country in supplying these types of recreation opportunities. A substantial portion of these lands consists of unlogged (old) and unroaded forest. Haynes and Horne (1997) and McCool et al. (1997) go into greater detail concerning the economic net benefit and employment contributions, as well as the social contributions, of these lands.

Unlogged and unroaded forests that have experienced significant fire suppression and have grown vegetation more dense and with higher fuel loadings than were historically present may actually present a potential economic and social cost, as these types of forest are at much higher risk for uncharacteristic and severe wildfire. It is in these types of forests that most of the restoration work involving prescribed fire and fuels reduction is proposed, in order to reduce these potential economic and social costs.

Chapter 4 of the Final EIS contains some discussion of potential impacts to roadless areas, including the added discussion on natural areas. There are also various references to values of unroaded areas for aquatic, riparian, and terrestrial habitats and species.

Implementation and Monitoring of Economic Direction

Comment: *Work collaboratively with affected parties when proposing reductions in grazing.*

Response: Objectives B-O59, B-O62 and B-O63 (see Chapter 3 of the Supplemental Draft EIS) all reflect the intent for local administrative units to collaborate with affected parties and stakeholders in planning, implementation, and monitoring.

Comment: *The rate of implementation of ICBEMP (including required assessment and analysis processes) can economically affect counties through delay in benefits from productions of goods and services or loss of federal revenue-sharing payments.*

There is presently proposed legislation [Secure Rural Schools and Community Self-Determination Act of 2000] that could substantially change the payments to counties program and should be discussed in the EIS.

Response: Potential effects of the rate of implementation are acknowledged and discussed in the Effects on Communities from Delayed Rate of Implementation section in Chapter 4 of the Supplemental Draft EIS.

On October 30, 2000, the President signed the Secure Rural Schools and Community Self-Determination Act. This law will give counties that have experienced (or expect to experience) a decrease in federal revenue-sharing payments because of declines in federal revenues from BLM- and Forest Service-administered lands, the opportunity to elect a constant annual payment amount for the next five years based on the high-three average of payments made during fiscal years 1986-1999. This new law will reduce one source of potential adverse effects on counties and communities from delays in implementation of the proposed action.

Comment: *It is naive to think that we will do much restoration in Riparian Conservation Areas (RCA's), A1/A2 subwatersheds, and T watersheds.*

Response: A1 subwatersheds and T watersheds are not expected to have much priority restoration work done in the first decade, because those areas tend to have the most intact ecosystem functions and processes. Restoration work would be carried out in A2 subwatersheds, which are important core habitat areas but are in need of protection and restoration of ecosystem process and function. (See Supplemental Draft EIS, Chapter 3 discussion of A1 and A2 subwatershed and T watershed objectives and standards, pages 124-137.) RCA's have similar needs which will be identified during Subbasin Review and Ecosystem Analysis at the Watershed Scale during the step-down process.

Comment: *Community, labor force, and mill capacity may be unable or unwilling to handle proposed restoration work and outputs. Implementing the restoration work as*

proposed will require innovative structuring and packaging of projects and contracts.

Response: Community, labor force, and mill capacity are all factors of uncertainty for implementation of the proposed action at the local level. These factors will be assessed in much greater detail during the development and implementation restoration projects. Where capacity is a problem, the objectives in the Supplemental Draft (Chapter 3) call for collaboration with other governmental and private entities to support development or improvement of the needed capacity, as part of a broader economic diversification effort. The objectives also call for seeking innovative ways to make work and contracts more accessible to local firms and individuals. Part of the collaboration process will be to encourage innovation that fits local situations, within the range of authorities available to the implementing government agencies.

Comment: *Attempts to "target" contracts to local communities are likely to increase costs, reduce efficiency, and reduce quality of the final product.*

Response: Objective B-O64 (Chapter 3) recognizes that supporting social and economic needs of communities, including economic activity important to rural and tribal communities, can have a higher priority than maximizing cost effectiveness. When concurrent goals of economic equity (employment and income effects) and economic efficiency (cost-effectiveness) exist, generally one has to be achieved at some expense to the other. Both may not be maximized at the same time.

Comment: *Contracting and bid requirements will need to be carefully designed to effectively get desired results. Achieving the Supplemental Draft EIS objectives will also require service and stewardship contracts and job training.*

Response: A variety of innovative approaches such as these will be explored with other partners and stakeholders during the step-down process and implementation in order to best achieve the objectives.

Comment: *There is no provision in the plan for socio-economic monitoring.*

Response: Monitoring and evaluation are recognized as integral to adaptive management and key to achieving goals and objectives (discussed in Chapter 3, of the Supplemental Draft EIS, pages 51-52).

Socio-economic conditions, along with physical and biological resources, are recognized as widely diverse and variable. The intent is for the monitoring and evaluation strategy to be developed through a collaborative intergovernmental, interagency, and interdisciplinary process; based on scientific understanding of interactions among ecosystem components and human activities; affordable; and technically feasible. Monitoring key socio-economic indicators will be part of this strategy.

The implementation monitoring portion of the monitoring plan is included with the Record of Decision (ROD). The remainder of the monitoring plan (for example, effectiveness monitoring) will be completed within two years after the ROD is signed.

Social

General

Comment: *Social topics and issues are not adequately represented in the Supplemental Draft EIS and the analysis of effects. Why didn't the project team have more social scientists?*

Response: Social scientists were included in the development of the project science and in the development of management direction. The expertise of social scientists is incorporated into the Final EIS. Social issues and topics are discussed in the social-economics tribal component sections of the EIS.

Comment: *For some respondents, the direction and analysis do not adequately address the impacts of the proposed action on all types of social values. For others the impacts on communities have been stressed too much.*

Response: Chapter 4 has specific information about the potential impacts of the direction on tribes, communities, and people across the project area to the degree that such effects can be estimated at the broad scale of this EIS. This information on estimated effects has been provided at the basin-wide scale and at the scale of the RAC/PAC areas. The publication *Economic and Social Condition of Communities* (ICBEMP 1998) was distributed to more than 9,000 people for public comment. The information it provided is also important to help understand the potential effects to people at this broad scale.

One of the purposes for the project was to determine if the social needs of people (local, rural, and national)

could be met by an ecosystem-based strategy that provides for sustainable ecosystems and the needs of people. The Final EIS provides that balance, to the extent possible, given federal law, the needs of ecosystems, and the needs of people.

Comment: *Why doesn't the direction focus more on education, outreach, and information as a way of lessening the social impact of people on bears or other natural resources?*

Response: The Final EIS endorses the use of information and education to foster public understanding of issues and to promote environmental sensitivity toward resource issues. However, education as management direction is more appropriate as a standard in a fine-scale planning document, where it can address specific educational opportunities in specific geographic areas for site-specific issues.

Comment: *Science has delineated what is needed for ecosystem management. By whom and how will the needs of communities be decided?*

Response: The purpose and need of this project is to balance the biological and physical needs of ecosystems with the needs of people and society. An in-depth analysis of effects on social and economic systems, including two reports to Congress on these effects, were completed by social scientists assigned to the project.

Comment: *Are there scientific studies to verify the statement in Chapter 2, page 161, that areas offering high quality recreation and scenery are also experiencing rapid population growth?*

Response: The Social Chapter (McCool et al. 1997) of the *Scientific Assessment* identified that federal lands will play an increasing role of providing amenity values such as scenery, recreation, and open space. They also found that the fastest growing areas were those with ample recreation opportunities that were attracting immigration, leading to more people and more recreation-based jobs. Also, Johnson and Beale (1995) provide more discussion about the correlation of recreation/tourism activity at the county level and population growth in the county.

Comment: *The Supplemental Draft EIS should discuss how influxes of transient populations from urban areas influence rural communities.*

Response: Population dynamics and growth across the region were analyzed in the Economics Chapter (Haynes and Horne 1997) of the *Scientific Assessment* and summarized in Chapter 2 of the Supplemental Draft EIS. An understanding of population growth in the western United States and in the interior Columbia River Basin is important for setting the social and economic context for natural resource issues and the management of federal lands. Assessment of more specific situations, such as potential social and economic effects on specific rural communities, would be done during the step-down process.

Comment: *Local governments and residents must be real partners with the federal agencies and have their ideas and needs given primary consideration in all decisions, particularly those that may affect their well-being, local economies, private property, land use planning, customs and cultures.*

Response: The significant role played by county and local governments in rural communities and economies has been recognized and evaluated in several science documents (Haynes and Horne 1997; McCool et al. 1997) and related science publications, and through the collaboration process used in the development of the Supplemental Draft EIS.

In Chapter 3 of the Supplemental Draft EIS, Social-Economic-Tribal Component, objectives and standards provide the direction for coordination and collaboration by the federal land managing agencies with state and local governments and other entities. While the overall intent is to support economic and social needs of communities and cultures close to or dependent on resources from Forest Service- or BLM-administered lands, these are national public lands, subject to national law, regulation, and policy. There is no guarantee that local needs will always receive primary consideration in decisions affecting Forest Service- and BLM-administered lands in the basin.

Comment: *The Supplemental Draft EIS needs to identify specific areas where use of prescribed fire will pose greatest risk in terms of (1) fire hazard due to heavy fuel loadings, and (2) severe smoke impacts near major populated areas.*

Response: This will be analyzed and disclosed during the step-down process (Subbasin Review and Ecosystem Analysis at the Watershed Scale) and local project-level implementation. Such information is too site-specific to have been analyzed at the project's

broad scale. At the basin-wide and RAC/PAC area scale, fire as part of succession/disturbance regimes in forestland is discussed in Chapter 2, pages 42-61. Effects of past fire suppression actions on forest health is discussed in Chapter 2, pages 222-229. Estimated effects of smoke from wildfires and prescribed fires on air quality and visibility at the broad scales are discussed in Chapter 4, pages 24-38.

Comment: *Strong consideration should be given to adding "protection of public property" to the list of priorities for fire suppression in the standards (Chapter 3).*

Response: The existing list of priorities (human life, public safety, private property, and improvements or investments) are those that will receive first attention in fire suppression efforts. It does not mean that protection of public property (forests or rangelands) would not be undertaken if the expected effects of wildfire are determined to be unacceptable; however, the other categories would be considered of higher priority.

Comment: *There is a concern that the science does not support logging to reduce the potential impacts of fire on the urban interface.*

Response: Restoration activities are proposed to decrease the risk of uncharacteristic fire. These activities focus on reestablishing vegetation to a range of variability more consistent with the ecological factors that influenced the historical ecological pattern of fire in the project area. Improvements in these conditions can be made by concentrating all types of restoration activities in these areas. Activities that can specifically help reduce the fire risk include: thinning, timber harvest, prescribed fire, fuel reduction activities, green strips, brush reduction, adequate access for suppression and responsive effective suppression efforts.

Scenery

Comment: *There is not much in the Supplemental Draft EIS describing the scenic resources of the basin. Scenery is important to the second home and retirement industries, but has not been discussed.*

Response: The Social Chapter (McCool et al. 1997) of the *Scientific Assessment* discusses scenery in terms of landscape themes and scenic integrity (pages 1960-1964). This discussion was carried forward in condensed form into the 1997 Draft EISs. There is a

shorter statement of the importance of scenery to basin residents and visitors in the Supplemental Draft EIS (page 178). Scenery, in terms of aesthetic attraction of landscapes or more localized features, is a factor of recreation use and supply, as well as of quality of life for basin residents. Changes to scenery from the ICBEMP Alternatives could not be modeled at the project's broad scale. Scenery issues are more appropriate at the local level—along with recreation issues, roads, and vegetation management as they interact with scenery and—during the step-down process at the mid and fine scales.

Comment: *What is meant by the reference to “scenic integrity” in the Chapter 2 section on Fire Suppression and Human Uses?*

Response: Scenic integrity is a term used in the Social Chapter (McCool et al.1997) of the Scientific Assessment and in the 1997 Draft EISs. It is a measure of relative fragmentation of landscapes. High scenic integrity is a measure of landscapes that have little to no human-caused fragmentation. Scenic integrity is not necessarily the same as high quality scenery, or scenery with high visual attraction for people.

Recreation

Comment: *There should have been a full discussion in the Supplemental Draft EIS of the recreation resources of the interior Columbia River Basin; the uses, values and employment associated with those recreation resources; and expected changes in recreation opportunities and expected uses, whether caused by implementation of ICBEMP or from other sources.*

Some of the most important implications of recreation are its effects on second home and retirement industries. This has not been discussed.

Response: The importance of the recreation resource in the basin and its contribution to the local and regional economies is recognized in the general discussion of recreation supply, use, and management issues found in Chapter 2, pages 175-178, Land Ownership and Major Uses, and in the shorter discussion of recreation-related employment found in the Overview of Employment in Chapter 2, page 193. Much more detail on recreation in the project areas and its contribution to the region and nation can be found in Haynes and Horne (1997), McCool et al. (1997), and Crone and Haynes (1999).

The reasons for not projecting changes in recreation supply or use in the Supplemental Draft EIS are discussed in Chapter 4, page 149, Levels of Output and Management Activities Expected from the Alternatives. It is a matter of scale. The types of factors that are most likely to affect supply of various recreation opportunities are identifiable at the medium to fine scale, related primarily to specific decisions on roads and access that would be made at the subbasin and local levels during the step-down process, and on effects of implementation of management objectives and standards at the local level (for instance, for Riparian Conservation Areas). At the broad scale modeled for this project, changes in those factors could not be identified; thus, expected changes in recreation supply or use could not be projected.

Comment: *A clear statement needs to be included in the purpose and need statement that recreation is a social need. This planning effort has not recognized that role in proportion to its current and future importance.*

Response: The second bullet of the “purpose” part of the purpose and need statement in Chapter 1, page 10, of the Supplemental Draft EIS says “Support economic and/or social needs of people, cultures and communities...” The term ‘economic and social needs’ covers a wide variety of resource uses and effects, including recreation. It was not possible to specifically single out recreation without adding a long list of other uses and values. However, the importance of the recreation resource in the basin and its contribution to the local and regional economies is recognized in the general discussion of recreation supply, use, and management issues found in Chapter 2 and elsewhere.

Comment: *If you couldn’t project actual changes in recreation, it seems that at a qualitative estimate would be better than nothing at all; or, at the very least, the direction of change could have been estimated and discussed.*

The demand for developed recreation and increased access to federal resources will undoubtedly increase as the basin’s population increases. Proposals for drastic road closures across federal lands are in conflict with these projected increases in demand for motor-related recreation access. Implementation of ICBEMP will reduce road-related recreation supply and use.

Response: Until specific decisions are made on roads and access at the subbasin and local levels, and local estimates of effects of Riparian Conservation Area and other management objectives and standards have been made, based on local data, it is not possible to estimate recreation trends or access demands. However, it is likely that the abundance of roads in existence may still leave ample recreation access, even after some roads are closed, especially if careful planning is done at the local level to minimize impacts on major access routes. In addition, closing some roads should increase the amount of recreation opportunities in less developed settings.

Comment:

For some respondents:

Based on other studies, we question that the demand for unroaded recreation is increasing, especially relative to the demand for recreation requiring motorized access.

For other respondents:

Primitive recreation use will grow dramatically with proposed broad protections. Associated jobs will increase as well.

Response: The Scientific Assessment found that demand for unroaded types of recreation is remaining relatively constant. Chapter 2, page 178, in the Supplemental Draft EIS has been changed to reflect this. The emphasis in that statement is intended to be on maintaining the supply of unroaded recreation opportunities to meet existing and future demand, both regionally and nationally. Nationally, primitive camping, backpacking and hiking recreational opportunities are expected to be among those in shortest supply over the next few decades (McCool et al. 1997).

Comment: *With an aging population and high motor viewing usage, we question whether the caption for the photo on 2-181 about rapidly growing trail use in less-developed areas is true.*

Response: According to the Social Chapter (McCool et al. 1997), of the Scientific Assessment, projections made by the states of Oregon, Washington, Idaho, and Montana in their Statewide Comprehensive Outdoor Recreation Plans showed that trail use, a majority of which takes place in less developed settings, is expected to be one of the fastest-growing activities in all four states (emphasis added). In this case, "less developed" should not be equated to

unroaded or primitive. Rather, it simply means hiking in natural areas or settings that are not urban or with substantial human development. That could include hiking in local or state parks that may be roaded, and hiking on interpretive or nature trails associated with campgrounds or roadside view sites.

Comment: *I am concerned that without any guidance on recreation from ICBEMP administrators, existing and possible future recreational uses of public lands in the equation will be ignored.*

Response: Recreation issues will be addressed during the step-down process at the mid and fine scale by local administrative units. In the meantime, existing local plans contain direction related to recreation that will be followed, in accordance with objectives and standards in the Final EIS.

Comment: *The Supplemental Draft EIS does not address recreation special uses such as ski areas and recreation residences.*

Response: Recreation special uses were not identified as a basin-wide issue in need of resolution through the broad-scale approach of this project. These special uses (for example, downhill ski areas, recreation residence groups, and outfitter-guide businesses operating under special use permit) are site-specific in nature. During implementation of the proposed decision and the step-down process, fine-scale analysis will identify any potential recreation special use issues that may be potentially affected by implementation. Resolution of such issues will be explored within the framework of local land use plans, as amended by objectives and standards in the Final EIS. Expected effects will be documented through the NEPA process at the local level.

Wilderness, Roadless, Unroaded Areas

Comment: *Some respondents believe that the Supplemental Draft EIS provides too much protection for unroaded areas, wilderness areas, and national monuments. Others feel that there is too little protection for these areas.*

Response: The Supplemental Draft EIS addresses the ecological values that unroaded areas contribute to species protection, habitat expansion, and recovery of certain source habitats that have declined substantially from historical conditions.

The management direction calls for the maintenance and restoration of these areas wherever practical. The Supplemental Draft EIS does not, however, create specific allocations of roadless areas. The management direction neither changes the status of designated wilderness or national monuments within the interior Columbia River Basin nor proposes additional acres of wilderness or the designation of additional monuments.

Comment: *None of the proposed alternatives provides for any permanent protection of any lands as wilderness.*

Response: Because the designation of federal land as wilderness can only be done by the U. S. Congress, wilderness recommendations must be submitted by the President to the Congress for their consideration and action. Identifying lands as suitable for wilderness is not within the scope of this EIS.

The BLM and the Forest Service manage designated wilderness areas and their resources in part by ensuring that appropriate activities are authorized and monitored regularly. The preferred alternative includes ecosystem-based direction that would enhance management of wilderness.

Comment: *Some feel that the management direction should prohibit road building in roadless and other unroaded areas to protect and promote roadless values. Others feel that road building should be allowed in roadless areas to allow restoration to occur.*

Response: The overall intent of ICBEMP roads direction is to reduce road-related adverse effects through a variety of techniques including obliteration, closures, and road improvements and to progress, in a staged approach, toward a smaller transportation system that can be effectively and efficiently maintained into the future with minimal environmental impact. Subbasin Review, Ecosystem Analysis at the Watershed Scale, and roads analysis will systematically and hierarchically evaluate existing road system needs and establish priorities for road restoration and closure.

These analyses would consider the whole watershed and weigh the risks to resources or people from such disturbances as uncharacteristic wildfire compared to the risks to habitat values for species potentially affected by roads, such as anadromous fish and wide-ranging carnivores.

While not prohibited by ICBEMP direction, the building of new roads in unroaded areas would be very rare. In the event that the analysis processes indicate that restoration is needed in an area where there would be a need to build a road, the proposed action would need to comply with the ICBEMP management direction and all applicable laws including the Endangered Species Act and NEPA. Road-building in inventoried roadless areas would be governed by the Forest Service Roadless Area Conservation Final Rule, anticipated in December 2000.

Comment: *Why did the Assessment of Ecosystem Components (Quigley and Arbelbide, 1997) find that the protection of unroaded areas 1,000 acres or larger should not be protected? What science are they using to back up this argument?*

Response: The Assessment of Ecosystem Components (Quigley and Arbelbide 1997) found in their modeling that a "reserve" system created by landscape-scale disturbances is difficult to maintain. Reserves were found to have a high potential for large wildfires, and increased expansion of exotics weeds. The potential to increase fragmentation of habitats was higher in the "reserve" areas under this analysis. These effects were limited by the broad geographic and time scale of the analysis, the coarse resolution of the data, and limitations on the ability to infer populations results from habitat analysis and gaps in knowledge (Status of the Interior Columbia Basin, Summary of Scientific Findings, ICBEMP 1996).

Comment: *The Supplemental Draft EIS does not adequately discuss the impacts of proposed activities on the many significant values of unroaded areas.*

Response: The Supplemental Draft EIS contains direction that is intended to protect the values of unroaded areas. Examples include objectives to: minimize miles and effects of roads; develop broad-scale connectivity of terrestrial and aquatic habitats; sustain hydrologic and other ecological processes; prevent further loss of terrestrial source habitats; conserve and maintain aquatic habitat conditions; and maintain and restore water quality. The Supplemental Draft EIS analyzes and discusses the effects of the alternatives on all these characteristics and values of roadless areas; however, the effects are described for the broader landscapes of the project area and the region and are not restricted to roadless areas.

Comment: Subjective terms such as “need,” “rare” and “minimize” that show up in the discussion of intent are not effectively clarified or quantified in the associated objectives and standards. Thus, these crucial issues will be addressed in a highly discretionary context at the local level.

Response: The intent of the management direction is to provide a broad-scale ecological context for site-specific Forest Service and BLM decisions. While managers would have discretion to make local decisions, those decisions would be made following appropriate finer-scale analysis and planning processes and would have to be consistent with objectives, standards, and all applicable laws. The language in the management intents and rationales in Chapter 3 is intended to convey this flexibility.

Comment: ICBEMP does not consider the wide range of social and economical benefits of unlogged and unroaded forests. The management direction misinterprets the value of reserves and the ecological significance a reserve system would contribute to species protection and protection of rangeland habitats.

Response: The Scientific Assessment and the Supplemental Draft EIS management direction highlight the values of unroaded areas (including inventoried roadless and BLM wilderness study areas) to aquatic and terrestrial species and to quality of life, recreation, and other social and economic values. However, the science also points out that a “reserve” system in a dynamic and disturbance-based ecosystem such as the interior Columbia River Basin, may not be the most effective method for promoting the areas natural processes. These dynamic systems need to adjust to ever-changing conditions and as a result, the management direction promotes both protection and restoration of these lands.

The management direction proposes the protection of 6.5 million acres of aquatic habitat (3.1 million of which are outside designated wilderness areas) in A1 subwatersheds and the protection and restoration of 6.8 million acres of aquatic habitat (6.0 million of which are outside of wilderness areas) in A2 subwatersheds. Protection is also proposed for 14.3 million acres of terrestrial source habitat in T watersheds (9.5 million of which are *within* wilderness areas). Any proposed restoration is designed to resemble historical disturbance to help bring these systems closer to their historical patterns of change.

Years of fire suppression, logging and grazing require that restoration in some of these dynamic ecosystems be conducted to promote the long-term health of the region. Simply creating a reserve system would not address the significant threats some of these areas face from wildfire, noxious weeds, and insect and disease infestation. Logging can be an effective tool to achieve desired vegetative characteristics, along with fire and other management activities.

ICBEMP direction focuses on achieving desired conditions as expressed in the objectives, while allowing specific tools to be selected at the local level. Nothing in the management direction diminishes the value of the existing 11.3 million acres of the federal land in the project area that are already congressionally designated as wilderness or those areas currently protected as wilderness study areas.

Comment: The Supplemental Draft EIS did not incorporate the best available science regarding roadless areas, conservation biology, core preserves, and connectivity.

Response: Ecological values and conditions of roadless areas are addressed in the Supplemental Draft EIS through an emphasis on reducing new road construction from past levels, rarely providing for new roads in currently unroaded areas, closing or obliterating unneeded roads and restoring ecological values, and improving needed roads to minimize adverse environmental effects.

Conservation biology concepts such as core reserves and landscape level processes and management are key features of direction for areas spatially designated for conservation or restoration of aquatic and terrestrial habitats (such as A1 and A2 subwatersheds, T watersheds, and riparian areas) and in objectives and standards within the Landscape Dynamics Component section of Chapter 3. Base-level direction provides for integrated management for terrestrial and aquatic habitats, as well as human components, across the landscape. There is much direction specifically addressing connectivity for both terrestrial and aquatic species, including: B-O49, B-O50, B-S53, B-O52, R-O2, R-O4, R-O14, R-O16, R-O21, R-O23, R-O25, T-O1, A1-O1, A2-O1.

Comment: The Supplemental Draft EIS does not consider the limited authority of federal land managers to

control the impacts of existing and potential mineral mining related activities on unroaded areas of high ecological integrity.

Response: The rationales for Standards B-S34, A1-Sa, and A2-S4 have been revised to make it more clear that valid existing rights may limit land management agency discretion in some cases, such as in certain situations under the mining laws. These standards require the use of existing authorities to minimize the impacts of uses conducted pursuant to valid existing rights. For example, where lands are not withdrawn from mining, or where valid mining claims exist in withdrawn areas, agencies impose such reasonable conditions on mining activities as necessary to protect public resources.

Comment: *The Response to Comments on the Draft EISs does not provide an appropriate or rational response to the proposal to include an alternative that would put old growth and roadless areas off limits to logging (Appendix 4, page 4-25; that roads would be rare in some roadless areas).*

The Response to Comments also does not address the request for a comparison of Oregon Governor Kitzhaber's proposal for a long-term regional approach with the ICBEMP strategy.

Response: The project emphasizes outcome-based direction, aiming to achieve certain conditions and processes across the landscape rather than to prohibit or require specific activities or management actions in any particular area. Road management direction is intended to reduce or prevent road-related effects on ecological values, not to prohibit road construction per se in any particular site-specific area. While roads determined to be no longer needed would be closed or obliterated, those roads that are deemed necessary would be improved as needed to minimize adverse environmental effects, and new roads into currently unroaded areas of any size would be rare. The intent of the old-forest direction is to maintain old-forest characteristics and prevent loss of old-forest conditions from natural and human-caused disturbances. Over the long term, the intent is to increase the extent of old forests, promote long-term sustainability of old forests, and preclude uncharacteristically severe wildfire through activities such as prescribed fire and thinning. To prohibit all management activities in unroaded areas and old forests would ignore the scientific findings that in some instances

restoration may be needed (such as thinning or prescribed fire) to promote the long-term health of these areas.

In the Supplemental Draft EIS, Alternatives S2 and S3 contained numerous features that are compatible and consistent with Governor Kitzhaber's forest health proposal, which was considered by the EIS Team along with other studies and plans in the development of the alternatives. In the Final EIS, the proposed decision identifies and maps specific important habitats with intact succession/disturbance patterns that are strongholds for aquatic species (A1 and A2 subwatersheds) or important as source habitats for families of terrestrial species (T watersheds). It also identifies subbasins with broad-scale priority for restoration and provides broad-scale restoration direction that links ecological needs and opportunities to social and economic (including tribal) needs and opportunities.

Comment: *The Supplemental Draft EIS does not identify roadless area locations.*

Response: Areas of zero to low road density (and whether they overlap with high carnivore habitat abundance) are shown in Chapter 2 of the Supplemental Draft EIS, Map 2-116, page 2-115. Inventoried roadless areas are not identified specifically because they do not receive specific management direction in the Supplemental Draft EIS.

Comment: *The Supplemental Draft EIS did not consider and may be inconsistent with the Forest Service Roadless Area Conservation proposed rule and proposed Transportation Policy currently under development. The Final EIS should fully analyze and present how the proposed Forest Service Roadless Area Conservation EIS and the Road Management Strategy will interface with the ICBEMP EIS.*

The Administration's "proposal" relates to both inventoried and uninventoried "roadless" lands which represent significant areas of public land resources, and which are readily mapped and available but were not specifically included in the ICBEMP analysis. It is inappropriate to simply represent this scenario by saying, "The project's Record of Decision will require management actions to be consistent with the finalized roads policy."

Response: Both the Forest Service Roadless Rule and the Forest Service Transportation Policy (Roads

Policy) are in draft stages, so it is not possible for the Final EIS to analyze in detail specific features that may change before these proposals are finalized. However, the Final EISs for ICBEMP, the Roads Policy, and the Roadless Area initiative all use the same science as the foundation for their respective effects analyses. In addition, the Roadless Area Conservation Final EIS considers the direction in the ICBEMP preferred alternative from the Supplemental Draft EIS in its analysis of cumulative effects. The ICBEMP Final EIS incorporates direction from the Roads Policy into the proposed decision (for example, the requirement to conduct roads analysis).

The ICBEMP proposed decision allows minimal ("rare") entry into unroaded areas and is expected to be minimally affected by the Roadless Rule. Currently, the ICBEMP proposed decision is consistent with both the proposed Roadless Rule and the proposed Roads Policy. Appropriate and necessary connections will be made as progress is made on completing the final Roadless Rule and final Roads Policy. The ICBEMP Record of Decision (ROD) is expected to be signed after the Roads Policy is finalized, and the ROD will require management actions to be consistent with the final Roads Policy.

Comment: *The Roadless Area Conservation Proposed Rule is resulting in new information that is not compatible with information in the Supplemental Draft EIS. The project's Science Advisory Group and EIS Teams used a different assumption for the future management of inventoried roadless areas than the Preferred Alternative for the Roadless Area Conservation Draft EIS. Therefore, the Supplemental Draft EIS alternatives will be invalidated with the implementation of the Proposed Roadless Area Conservation EIS and Record of Decision. The ICBEMP Final EIS should be deferred until the Roadless Area Conservation Rule is finalized.*

Response: ICBEMP direction is broader in scale and more outcome-based than the proposed Roadless Area Conservation Rule. None of the direction in the ICBEMP Final EIS focuses directly on inventoried roadless areas; rather, it specifies conditions and processes that are to be achieved. The data and information being brought forward and analyzed in the Roadless Area Conservation Rule do not substantially affect the analysis and direction being developed under ICBEMP, because ICBEMP direction proposes little or no specific management direction within inventoried roadless areas. It is not necessary

for the ICBEMP Final EIS to be deferred until the Roadless Area Conservation Rule is finalized. However, appropriate and necessary connections and adjustments will be made as progress is made on completing the final Roadless Rule. The ICBEMP Record of Decision will clearly state that management actions shall be consistent with the finalized national level roadless policy when it is completed.

Comment: *Forest Service roadless areas make up only a portion of the roadless lands in the project area. By saying that the Forest Service Roadless Area Rule is sufficient, a significant amount of lands that the BLM manages as wilderness study areas is ignored.*

Response: The Scientific Assessment and the Supplemental Draft EIS management direction highlight the values of unroaded areas (including inventoried roadless and BLM wilderness study areas) to aquatic and terrestrial species and to quality of life, recreation, and other social and economic values. ICBEMP direction focuses on achieving desired conditions as expressed in the objectives. The Forest Service Roadless Area Rule would provide direction for inventoried roadless areas only, and would be in addition to ICBEMP direction for protection and restoration of other unroaded area values, including wilderness study areas. Nothing in the management direction diminishes the value of the existing areas currently protected as wilderness study areas. The EIS does not alter the status of, or the regulations that guide, the management of BLM-administered wilderness study areas.

Roads, Transportation, Access

Comment: The direction in the preferred alternative should be consistent with the Forest Service's and BLM's national policies regarding road management and Off Highway Vehicles (OHVs).

Response: The Forest Service's Roadless Area initiative examines the issue of future management of inventoried roadless areas. The Forest Service's proposed National Roads Policy focuses on managing the existing road system within budgetary and environmental constraints.

The ICBEMP Final EIS, the National Roads Policy, and the Roadless Area initiative all use the same science as the foundation for their respective effects analyses, and they are consistent with each other. In

addition, the Roadless Area Conservation Final EIS considers the direction in the ICBEMP Supplemental Draft EIS preferred alternative in its analysis of cumulative effects. The ICBEMP Final EIS incorporates direction from the National Roads Policy into the proposed decision (for example, the requirement to conduct roads analysis). The ICBEMP Record of Decision (ROD) will require management actions to be consistent with the final Roads Policy.

The public comment period for the BLM's national Off-Highway Vehicle (OHV) Strategy closed on August 31, 2000. Using the input it received, the BLM intends to develop guidance to be used by its field offices in developing local solutions to OHV conflicts. This guidance is scheduled to be completed by the end of November 2000. The ROD for the ICBEMP will require management actions to be consistent with the OHV Strategy.

Comment: *Several commentors addressed the ten-year time limit for developing or revising access and travel management plans. Some were concerned about the agencies' ability to meet this deadline with existing funding levels and other obligations, agreements, and priorities. Others proposed shorter time limits, particularly for high restoration priority watersheds. One commentor suggested that a prioritization system be used for completing the plans.*

Response: The intent of the ten-year time limit is to allow adequate time for decisions on management of roads to be made at the local level (with involvement from interested and affected parties) through the access and travel management planning process. These decisions will be based on a scientific roads analysis. Roads analysis is designed to provide the information and context needed to effectively and efficiently reduce identified road-related adverse effects while considering the need for public access, tribal rights, and resource management. The EIS Team determined that a ten-year time frame strikes a balance among feasibility, the use of a collaborative planning approach, and the need to address adverse effects in a timely manner.

Comment: *The EIS should include specific proposals for road elimination based on geographic analyses already made by the agencies involved.*

Response: Specific decisions on which roads to close and how to close them is more appropriately left to

local decision makers. It is not the intent of the Final EIS to make site-specific decisions on changes in road use. Roads analysis will be incorporated into or conducted concurrently with planned Subbasin Review, Ecosystem Analysis at the Watershed Scale, and/or site-specific project NEPA analysis. This approach allows local BLM and Forest Service administrative units to use roads analysis and other sources of information in their land use and project planning processes.

Comment: *Some commentors want the preferred alternative to establish a road density limit.*

Response: Road density standards are most appropriately determined at the local level through the land use planning process. The proposed decision directs the federal land management agencies to conduct science-based analyses that look at the effects and benefits of roads within the capability of the land. These analyses provide decision makers with important information with which to make road density decisions when developing Access and Travel Management Plans and other decision documents.

Comment: *Several respondents request that specific requirements (such as best management practices) be established for the decommissioning, construction, and maintenance of roads. Others express support for the broad strategy in the preferred alternative which uses fine scale analyses to set specific requirements.*

Response: The proposed decision directs the federal land management agencies to use the step-down process to gather and apply the best available science and information. This approach enables the agencies develop effective best management practices (BMPs) that are appropriate to site-specific conditions. The agencies will apply these best management practices when planning, designing, constructing, and maintaining roads and other site-specific actions. However, because the control of road-related effects is an ongoing process and the science continues to be developed, adaptive management must be used to refine BMP design as necessary. To allow for adaptive management and in recognition of the diversity of resources and conditions in the project area, no basin-wide requirements related to roads are included in the preferred alternative.

Comment: *Several commentors want the beneficial uses of the existing road system considered in the EIS. In*

particular, they feel that roads are needed to access areas being affected by fire, floods, or forest health problems.

Response: The Final EIS discusses the economic and social importance of roads in Chapter 2. Roads provide access for multiple uses such as timber harvest, grazing, mining, recreation, subsistence uses, and fire suppression, among others. Roads also provide access to private lands within and adjacent to federal lands, and roads can have historical and cultural values. Non-access benefits of roads include providing edge habitat for wildlife, and acting as firebreaks. Since changes in roads (including conditions, locations, and access) were not modeled at the broad scale (because of data limitations), impacts to these beneficial uses could not be addressed in the Final EIS. These effects will be evaluated at finer scales during the step-down process.

Comment: *The standard that requires improvement of existing structures if there is a substantial risk to riparian conditions (Standard R-S5) should be clarified to specify how risk will be determined, acknowledge funding limitations, and establish priorities.*

Response: The rationale statement that accompanies Standard R-S5 defines structures that pose a “substantial risk” as those that do not meet operation maintenance criteria, or that have been shown to be less effective for controlling erosion, or that prevent attainment of aquatic and riparian objectives. The rationale statement for this standard also states that “the intent for accomplishing this standard is to incorporate stream crossing upgrade priorities identified from a roads analysis into project implementation, based on available funding”.

Comment: *The standard that requires construction of new and reconstruction of existing road crossings of streams and rivers that currently or historically supported native fish species (Standard B-S26) should explain how attainment of this standard will be measured. In addition, the “unless” clause in this standard should be rewritten to improve clarity.*

Response: To improve the clarity of Standard B-S26, a rationale statement has been added and other modifications made. The intent of this direction is for the federal land management agencies to use information from Roads Analysis, Ecosystem Analysis at the Watershed Scale, or other site-specific analysis to identify road crossings that are affecting fish

passage, fish spawning, and channel stability. Implementation monitoring will determine if planned activities are being implemented and if standards and objectives are being followed. The EIS Team plans to include the implementation portion of the monitoring plan in the Record of Decision.

Comment: *Some respondents state that the EIS does not address the impacts caused by off-highway vehicles (OHV) and snowmobile use nor does it include direction to address these effects. Other commentators want the EIS to address the adverse effects on recreation if fewer roads are open to OHVs, snowmobiles, and other recreation use.*

Response: At the broad scale addressed in the Final EIS, no changes in recreation use could be projected. Therefore, these changes are better addressed during mid- and fine-scale analyses (that is, Subbasin Review, Ecosystem Analysis at the Watershed Scale, land use plan amendment or revision, and/or site-specific NEPA analysis).

The Roadless Area Conservation Final EIS provides some general information about off-highway vehicle and snowmobile use that is applicable to the project area. For example:

- ♦ Demand for new opportunities for developed and road-based recreation is increasing and will continue to grow;
- ♦ This growing demand is and will be driven by population increases, population migration to areas close to federal lands, new and shifting recreation activities and technology, and other factors;
- ♦ As demand increases, more competition for recreation uses as well as conflicts between recreation users are likely. A road system with fewer miles would tend to exacerbate this effect.
- ♦ Although the outcome of the BLM’s National Off-Highway Vehicle (OHV) Strategy is still unknown, there is a trend for land management agencies to more closely monitor and manage OHV use. Rather than reducing the demand, regulation of OHVs is likely to displace use from one area to another; and
- ♦ Snowmobiling is expected to be one of the fastest growing outdoor recreation activities over the next 40 years. Restrictions on snowmobiles being

considered by the National Park Service could place increased pressure on the Forest Service and BLM to allow or continue this use on lands under their administration.

Comment: *The EIS should include management measures to mitigate the impact of roads on bear populations and the habitats of other terrestrial species such as elk, lynx, and fisher.*

Response: The overarching intent for roads management within the project area is to progress toward a smaller transportation system that can be maintained into the future with minimal environmental impact. This intent supports road management guidance contained in other existing plans such as the Grizzly Bear Recovery Plan. Specific mitigation measures are not outlined in the Final EIS because the impacts to species and populations from roads vary greatly throughout the project area. Instead, roads analysis will be used to identify road-related wildlife concerns. Access and Travel Management Plans can then be developed at the local level to address the risks identified through roads analysis or other processes such as Subbasin Review and Ecosystem Analysis at the Watershed Scale.

Road Management

Comment: *The standard that requires improvement of existing structures to accommodate a 100-year flood if there is a substantial risk to riparian conditions is too restrictive and will be cost-prohibitive. A 50-year flood event should be used as the standard, and the need for improvement should be identified through Ecosystem Analysis at the Watershed Scale or roads analysis.*

Response: This standard has been modified to improve its clarity. The standard now directs the agencies to design new or improve existing structures to the 100-year event standard when roads are constructed or reconstructed during restoration-related activities. Priority for upgrading would be identified through roads analysis or Ecosystem Analysis at the Watershed Scale, and implementation would be based on available funding.

Comment: *The Supplemental Draft EIS incorrectly characterizes BLM roads when it states that "it is estimated that about 30 percent of low standard roads are closed to the public...for all or most of the year".*

Response: The reference on page 2-187 in the Supplemental Draft EIS is referring to a combination of both Forest Service- and BLM-administered roads, not just BLM-administered roads. It is a reasonable estimate that 30 percent of total Forest Service- and BLM-administered low standard roads are closed to the public... for all or part of the year.

Comment: *The standard that directs the agencies to avoid side casting of soils or snow from roads in Riparian Conservation Areas (Standard S1-S28) is impractical.*

Response: Standard S1-S28 is included in Alternative S1 and represents current direction. It is not included in Alternatives S2 and S3.

New Road Construction

Comment: *Please clarify whether the direction prohibiting new road construction within A2 subwatersheds in the short term also includes the construction of temporary roads.*

Response: Temporary roads are those roads that are authorized by contract, permit, lease, or emergency operations and are not intended to be a part of the transportation system. Temporary roads built pursuant to valid existing rights (such as permits, leases, or contracts) are not prohibited but would be mitigated to the extent possible. Construction of other temporary roads could occur if a new road is needed to support implementation of an activity designed to achieve A2 subwatershed and aquatic objectives.

Comment: *The objective stating that "new road building should rarely occur in watersheds that are currently unroaded or have very few roads" should identify what policy or program direction would enforce this ban, and how "unroaded" will be defined.*

Response: The Forest Service's National Roads Policy and Roadless Area initiative are expected to provide additional direction pertaining to roads and roadless areas. The Record of Decision for the ICBEMP will require management actions to be consistent with these policies. Implementation monitoring will determine if planned activities are being implemented and if standards and objectives are being followed. The EIS Team plans to include the implementation portion of the ICBEMP monitoring plan in the Record of Decision.

Unroaded areas are defined as any area without the presence of a classified road that is of sufficient size and configuration that the inherent values associated with an unroaded condition can be protected. Unroaded areas do not overlap with inventoried roadless areas.

Comment: *Some respondents feel that the objectives and standards addressing new road building in unroaded watersheds, A1/A2 subwatersheds, and Riparian Conservation Areas are too restrictive and will preclude other uses and activities, such as forest restoration treatments. Other commentators want the direction strengthened, particularly in watersheds containing bull trout.*

Response: Decisions on management of roads would be made at the local level (with involvement from interested and affected parties) through the access and travel management planning process. These decisions will be based on a scientific roads analysis. Roads analysis is designed to provide the information and context needed to effectively and efficiently reduce identified road-related adverse effects while considering the need for public access, tribal rights, and resource management.

Comment: *The preferred alternative should direct that Ecosystem Analysis at the Watershed Scale be conducted prior to allowing any increases in road density to occur.*

Response: The Forest Service's National Roads Policy is expected to establish criteria on completion of science-based roads analyses prior to new road construction. Because roads analysis is specifically designed to provide the information and context needed to effectively and efficiently reduce identified road-related adverse effects while considering other needs, it is considered the most appropriate analytical tool to support decisions regarding roads. The Record of Decision for the ICBEMP will require management actions to be consistent with the National Roads Policy.

Comment: *The preferred alternative should be modified to include direction that prohibits road construction and reconstruction in unstable areas except in certain prescribed circumstances.*

Response: Decisions whether roads should be constructed or reconstructed in unstable areas are best made at the local level using knowledge of site-

specific resource conditions. Roads analysis and the access and travel management planning process are intended to address these fine scale issues.

Comment: *Retain the road construction prohibitions for A1 and A2 subwatersheds. Clarify the road construction exception for A2 subwatersheds so that the exception does not negate the rule. Use a "no retard" standard instead of the "achieves or maintains" or "does not prevent" standards currently used.*

Response: New road construction prohibitions in A1 and A2 subwatersheds are retained in the proposed decision. The A2 exception means that, if road construction activity will result in net positive environmental effect, it may be authorized after suitable analysis. It is the intent that such new construction would be rare. A "no retard" standard (one that prohibits an activity that could retard achievement of resource goals) has not been used because such a standard could prohibit an activity that is needed to reach long-term resource goals. For example, restoration/fuel reduction work would reduce the likelihood of catastrophic wildfire, but would be prohibited under a no-retard standard if, in the short-term, the action increased siltation.

Road Closures, Obliteration

Comment: *The preferred alternative should include a provision that the land base available for active management will not be reduced because of road closures and obliteration. Otherwise, the levels of timber harvest anticipated in the EIS may not be feasible.*

Response: Through the land use planning process, each administrative unit determines the location and amount of various land allocations, including lands available for active management. Because of the broad scale nature of this project, it is not possible to predict the outcome of the management direction on land use allocations for individual national forests and BLM districts.

Road-related Adverse Effects

Comment: *Road density should not be used as the only surrogate for assessing the impacts to watersheds and streams. Other factors, such as road location, design, and maintenance and hydrologic connectivity can have equal or greater significance.*

Response: The Description and Management Intent section of the Road Restoration direction acknowledges that road risk and road effects are not determined solely by road density but vary substantially depending on factors such as geology, landform, climate, slope position, road condition, and road design. A science-based analytical tool (roads analysis) will be used by the Forest Service (nationally) and the BLM (in the project area) to identify this variability and to appropriately evaluate road networks.

Comment: *The EIS should include more discussion of sedimentation from roads and the effects of roads on the introduction and dispersal of weeds, and it should provide more direction for reducing these effects.*

Response: The Scientific Assessment provides extensive information about the effects of sedimentation from roads and the spread of noxious weeds via the road network. In addition, the Forest Service recently published a comprehensive synthesis of information pertaining to road-related effects (Gucinski and Lugo 2000). The information included in the Final EIS is not intended to duplicate existing science; instead, it summarizes and interprets this more extensive information in the context of the decisions being made for the project area. The intent of Standard B-S25 is to prevent and reverse several adverse effects of roads, including sedimentation. The intent of Guideline B-G18 is to place priority on the prevention of weed spread by targeting roadways in weed management programs. This broad-scale direction in the preferred alternative is intended to be supplemented by more site-specific analyses and decisions that can better address existing cause-and-effect relationships among roads, noxious weeds, and sedimentation to streams.

Roads Analysis and Inventory

Comment: *Several commentors want the EIS to provide more specific information about the process for conducting roads analysis and its relationship to Access and Travel Management Plans and other plans and assessments that address roads. Others feel that the requirement to conduct roads analysis is unnecessary and duplicative.*

Response: Roads analysis is intended to complement and integrate previous and ongoing analytical efforts, including Access and Travel Management Plans, Ecosystem Analysis at the Watershed Scale (EAWS), and NEPA analyses. In fact, roads analysis will often be a component of EAWS and other analyses. How-

ever, roads analysis is not a decision process. Rather, it identifies and addresses a set of possible issues and applicable analysis questions that, when answered, produce information for decision makers to consider regarding road construction, reconstruction, and decommissioning opportunities. The opportunities identified through the analysis can then be used to inform other planning and decision-making processes.

A copy of the roads analysis process can be obtained from the following web site: <http://www.fs.fed.us/news/roads/DOCSroad-analysis.shtml>.

Comment: *We are concerned about the use of derived data to analyze the ecological effects of roads.*

Response: Forest Service administrative units are currently in the process of updating their inventories of existing roads. The proposed Forest Service Roads Policy addresses requirements for road inventories, and the current effort to update road inventories is expected to be completed within five years. The Final EIS uses predicted road density data instead of actual data because a continuous roads layer is not available across the project area. The predicted road density classes were derived using a statistical rule set based on several data sources, one of which was a mid-scale sub-sample of roads. These data were developed for use at the broad scale and are not intended to substitute for actual roads data at the finer scale.

Road Densities

Comment: *A definition of road density should be included in the EIS, and roads that are closed, but not removed, should still be included in the calculation of road density.*

Response: Road density is an indicator of the concentration of roads in an area. The roads analysis process provides detailed information about ways to determine and analyze this indicator. Road density has been added to the Final EIS Glossary.

Comment: *The road density classification used in the effects analysis is biased. While the "high" effect classification encompasses a wide range, the "low" range is narrow. This classification system makes it "easy" to move toward a higher impact category and difficult to move to a lower one, which skews the results.*

Response: The ranges of the various road density classifications (low, moderate, high, etc.) Is based on

anticipated effects. The Science Advisory Group determined based on review of the science literature that adverse effects on species from roads occur at relatively low road densities, and at higher densities effects are similar. For example, within the high road density classification substantial changes in effects on species would not be expected even though there is a wide-range of road densities within this class.

Access

Comment: *Adjacent land owners (state and private) would be harmed if we cannot use our property because of restrictions on access roads that cross federal lands. Access to private inholdings must be accommodated, and stipulations on rights-of-way should be reasonable.*

Response: Decisions on management of roads are best made at the local level (with involvement from interested and affected parties) through access and travel management planning and other processes. These decisions will be based on a scientific roads analysis and other information, such as the results of Ecosystem Analysis at the Watershed Scale. Roads analysis is designed to provide the information and context needed to address road-related adverse effects while considering the need for public access, tribal rights, and resource management.

Comment: *Chapter 2 of the Supplemental Draft EIS states that "in general, wildfires are becoming larger and effects are becoming more uncharacteristically severe because of timber harvest, fire suppression, and roading". Please explain how roads cause these effects.*

Response: Human access is likely to be increased by roads, which in turn greatly increases the chances of both accidental and intentional human ignitions. A potential factor in the increase in fire size and severity is an increased incidence of human-caused ignitions. The Scientific Assessment and various scientific studies provide further information about this relationship.

Comment: *The EIS should analyze the economic and social effects of restrictions on access resulting from existing and potential mineral claims and operations.*

Response: An analysis of the effects of existing and potential mineral claims and operations on access is not within the scope of this EIS. 1400 Land Status, Ownership, Uses

Tribal Rights and Interests

Federal Treaty Rights and Responsibilities

Comment: *We are unable to find any act of Congress specifically negating the 1865 Treaty with the Tribes of Middle Oregon. We suggest that prior to the Record of Decision, the question as to what specific interests remained after the 1865 treaty be resolved.*

Response: In accordance with principles of law confirmed in *United States v. Oregon*, 302 F.Supp.899 (D.Or. 1969), the Warm Springs Tribe exercises off reservation fishing rights secured by Article III of the 1855 Treaty Between the United States and the tribes of Middle Oregon, 12 Stat.963. Article III of the treaty also secures to the Tribe "the privilege of hunting, gathering roots and berries, and pasturing of stock on unclaimed land..." The federal courts' confirmation of the Warm Springs Tribe's off-reservation treaty rights is consistent with the federal government's practical construction of the 1865 Agreement, which has not been interpreted as a relinquishment of Warm Springs treaty rights.

Comment: *There is concern that access to certain public lands could be limited if a Tribe declares the area a traditional use area.*

Response: Agencies determine how public lands are to be managed. Tribal input is important, but expressed tribal interests do not automatically negate other public land uses.

Comment: *The Supplemental Draft EIS presents three alternatives none of which are adequate to comply with the federal government's duty to protect and rebuild salmon, consistent with its treaty and trust responsibilities. This is unacceptable and illegal. ICBEMP needs to revise the Supplemental Draft EIS consistent with the recommendations contained in Wy-Kan-Ush-Mi Wa-Kish-Wit.*

The document is unclear and contradictory in relation to its commitment to provide harvestable levels of resources. Federal land managers assert that they have a harvestability goal that they would like to achieve sometime in the next 50-100 years. This is completely unacceptable and a violation of the tribes' treaty secured rights. Neither decision-makers nor the public know what land management actions could be taken to maximize the likelihood of achieving populations capable of supporting

reasonable harvest. The clear message is that the tribes' right to take fish is becoming an illusory right that the federal government is declining to protect. The ground rules need to reflect the requirement to manage habitat to provide harvestable populations.

Response: One focus of the project is to establish objectives and standards to enhance fish and wildlife habitats. Management of fish and wildlife populations is outside BLM/Forest Service administrative responsibility. Responsibility for actual species populations rests with other state and federal agencies.

Comment: *The Supplemental Draft EIS must analyze and require a land management program that maximizes the likelihood of complying with the legal rights of Indian tribes.*

Response: The proposed decision addresses tribal legal rights to public land participation through adoption of objectives and standards guiding and leading to a collaborative approach to land management.

Comment: *Include the protection of Tribal Treaty rights in the discussion of trade-offs (see Chapter 1, page 26, discussion of Issue 3).*

Response: Treaty Rights are honored by the agencies, and integrated into all land management.

Comment: *Although it is correct to state that the trust responsibility is not fully defined, there is a rather extensive body of federal case law on this subject which should assist the Forest Service and BLM in determining the extent of their trust responsibility. This case law makes it clear that such a duty exists and that it is comprised of both a procedural and substantive component. This substantive component requires actual protection of rights and interests. Therefore, the statement that, "consultation and consideration alone may not be enough to redeem federal responsibilities" does not accurately capture the essence and extent of the trust responsibility. We note that where a tribal interest exists, there is a corresponding trust responsibility to protect this interest. Only abrogation by Congress can work to "supersede" the rights and interests reserved in these treaties, not competing interests deemed such by federal agencies.*

Response: "Tribal interest" does not necessarily equate to "trust responsibility." Agency trust responsibilities regarding public land management are limited and tribes do not have an automatic priority standing over other public land uses. Public land managing agencies must accommodate public inter-

ests as well. The agencies must not only honor treaties, but other public land laws as well.

Collaboration, Consultation, Coordination, and Cooperation with Tribes

Comment: *The Supplemental Draft EIS contains a detailed section on federal trust responsibility to tribes which describes the treaties but contains little or no information that complies with the substantive requirements to consider the objectives and plans and policies of local governments as required by 36 C.F.R. 219.17.*

Response: The federal government has a longstanding legal relationship with tribes established through treaties, laws, and court decisions in which the government is to protect the interests of tribes through a government-to-government decision-making process.

Comment: *There should be additional language within the Supplemental Draft EIS that stresses the importance and opportunities of tribal participation at both the policy and technical levels within planning and project implementation.*

Response: The Supplemental Draft EIS fully embraces and requires the collaborative approach to land use management including tribal participation at all levels of decision-making.

Comment: *ICBEMP should work with tribes to streamline analysis processes and avoid reinventing the wheel on every national forest, ranger district, and watershed.*

Response: The agencies recognize the unique interests of each tribe in the project area and the importance of identifying those interests at the local level. Every effort is made to streamline the process of collaboration and government-to-government consultation.

Other Comments

Congressional Report

Comment: *The agencies did not disclose the time and cost to the other participating federal agencies involved in the decisions of this plan as required in Section 323 (a) (2) of the 1998 Interior and Related Agencies Appropriations Act.*

Response: The BLM and Forest Service identified that programmatically the analysis costs would increase overall agency costs of restoration and planning, and could diminish the overall amount of funding available for projects. The U. S. Fish and Wildlife Service has identified that the implementation cost for their agency to expand their coordination, collaboration, and consultation on the plan direction would be an additional \$7.3 million per year. The National Marine Fisheries Service has identified an increased cost of \$3.4 million per year, and the Environmental Protection Agency has identified a need of an additional \$400,000 per year.

Comment: *Can the additional analysis of Subbasin Review and Ecosystem Analysis at the Watershed Scale (EAWS) can be accomplished in a timely fashion?*

Response: Through conducting several prototypes, the land management agencies now have experience with Subbasin Review and EAWS and believe that these processes can add value to risk management strategies and can be accomplished in a timely manner.

Comment: *If the Ecosystem Analysis at the Watershed Scale (EAWS) and Subbasin Review cost \$9.5 million to \$18.0 million per year, this represents 2-3 percent of the land management agencies' operating budgets.*

Response: The assumption is that the analysis process would cost \$9.5 million per year for the proposed decision. This would represent roughly less than .02 (two hundredths) of 1 percent of the land management agencies' total operating budget in the basin, and .6 (six tenths of 1 percent) of the land management agencies' estimated operating budgets used for restoration activities in the project area.

Comment: *The Report to Congress describes the goods and services that would result from each alternative compared to a baseline that is different from the baselines called for in BLM and Forest Service land use plans.*

Response: The Report to Congress acknowledges that there have been changes since timber volumes and actions were proposed in existing land use plans. These include lawsuits, PACFISH, INFISH, the Eastside screens, and the terms and conditions of the Biological Opinions on these strategies that have amended existing land use plans. It was not appropriate to assume that current conditions are the same as those identified in the original land use plans.

Comment: *There is a concern that the land management agencies made no attempt to identify how priorities would be established in accordance with appropriations in subsequent fiscal years. What is the prioritization process that would guide these budgets?*

Response: The land management agencies will continue to develop and formulate their future budgets in the same manner as they currently do under FLPMA and NFMA. The information from land use plans will feed into budget formulation to develop the needs of future budgets. The overall priorities and direction of the amended 62 land use plans will guide this budget formulation. The agencies will continue to formulate, present, and justify to Congress, the need for restoration of the federal lands in budget proposals that are submitted to their national offices on an annual basis.

Land managers would use the hierarchy of direction described in the base-level direction of the Final EIS to establish priorities. In addition, they would use the high restoration priority subbasins to guide formulation and allocation of budgets that may be appropriated by Congress in the future.

Comment: *The Report to Congress should have considered mineral, water resources, energy, recreation, and demographic changes.*

Response: The Report to the Congress (ICBEMP 2000) specifically responded to four items outlined by Congress in the FY 2000 Interior and Related Agencies Appropriations Act. The report states that because of the site-specific nature of resources such as minerals and energy the effects could not be modeled at the broad scale and were not estimated.

Appendices

Appendix 9 - Additional Aquatics Guidance

Comment: *The Supplemental Draft EIS should explain what agencies must do to comply with the standard that requires use of the U.S. Fish and Wildlife Service and National Marine Fisheries Service matrices (Standard B-S44) if they lack data about one of the indicators in the matrices. Why should the agencies be required to use the National Marine Fisheries Service and Fish and Wildlife Service matrices instead of allowing them to develop suitable factors, functions, and processes at the appropriate scales?*

Response: Until Watershed Condition Indicators (WCIs) have been developed and implemented, a modified matrix has been developed to assist field units in determining the consistency of their activities with aquatic, riparian, and hydrologic standards and objectives in the Record of Decision. (See the Final EIS, Appendix 9, for more information about the matrix.) The modified matrix is a multi-scaled diagnostic tool to evaluate site-level projects in the context of conditions at the subwatershed or watershed scale. However, this diagnostic tool cannot be used alone to make Endangered Species Act effect determinations.

The modified matrix is a compilation of the existing U.S. Fish and Wildlife Service (USFWS) Matrix of Diagnostics/Pathways and Indicators, and the National Marine Fisheries Service (NMFS) Matrix of Pathways and Indicators. The modified matrix was developed by a task team composed of regulatory and land management technical specialists working under the Interagency Implementation Team (IIT) established to streamline implementation of PACFISH, INFISH, and the Northwest Forest Plan.

Comment: *The land management agencies, and not the U.S. Fish and Wildlife Service and National Marine Fisheries Service, should make decisions about balancing the short-term and long-term needs of listed and proposed species (Objective B-O53).*

Response: In order to comply with the Endangered Species Act, the Forest Service and the BLM must consult with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service in cases where actions may affect a listed species.

Appendix 12 - Requirements for Snags and Downed Wood

Comment: *The standard that requires the agencies to use the downed wood and snag standards in Appendix 12 [B-S29(S2)] should be changed into a guideline for the following reasons: there is not enough narrative or data to justify the standard; the tables in Appendix 12 are unclear; this standard conflicts with standards for old-growth structure requirements; and this standard does not address spatial and temporal variability.*

Response: The information in Appendix 12 is to be used only until it is modified using local information. See Standards B-S28, B-S29, and B-S30.

Appendix 15 - Restoration Strategy

Comment: *The prioritization system outlined in Appendix 15 gives too much weight to aquatic/water quality components when identifying restoration priorities. This system cannot be considered an integrated approach. The Supplemental Draft EIS should either acknowledge a bias toward aquatic issues, or modify the process to give more consideration to non-aquatic needs.*

Response: An integrated approach was used to identify the high restoration priority subbasins. The weighting used for aquatic and water quality issues was determined by the number and distribution of listed aquatic species.

Appendix 16 - SAG Assumptions for Modeling the SDEIS Alternatives

Comment: *The Science Advisory Group assumes that at the completion of each field season information on the distribution and status of rare plants is incorporated and considered in new decisions. This assumption is not correct, as several years may go by before lists of rare plants are updated by the agencies.*

Response: On individual administrative units, new activities or projects and related decisions incorporate information gathered at the completion of each field season as part of the National Environmental Policy Act process. Several years can go by before agency lists of threatened, endangered, or sensitive species are updated. Consequently, the ICBEMP plant species of conservation concern correspond to those with state Natural Heritage Program rankings of G1-G3. These state Natural Heritage Program lists are updated annually. The list of species considered in Standard B-S51 and Objective B-O47 is dynamic and responsive to new information.

Outside the Scope

Removal/Breaching of Dams

Comment: *The Supplemental Draft EIS should address dam removal/breaching and the effects of dams on fish populations.*

Response: Chapter 1 of the Supplemental Draft EIS provides an overview of the multiple factors that have led to the decline in salmon populations in the interior Columbia River Basin. The factors discussed include hydropower, hatcheries, harvest and changes

in habitat. Within this discussion, it is noted that, "Hydroelectric development is generally regarded as a major factor in the decline of anadromous fish populations." While the document outlines the factors that influence salmon survival, the Supplemental Draft EIS applies only to BLM- and Forest Service-administered lands; therefore, ICBEMP management direction can only propose changes to the management of anadromous fish habitat on lands these agencies administer. Dam removal or breaching is outside the scope of this EIS; however, through Riparian Conservation Area direction, threatened and endangered species direction, and the designation of A1 and A2 subwatersheds, the management direction in the Supplemental Draft EIS is expected to improve federal habitat conditions throughout the basin.

Comment: *The direction should address financial surety and bonding for minerals work on federal lands.*

Response: This is a national policy that is beyond the scope of the ICBEMP Final EIS.

Funding for/Cost of ICBEMP Process

Comment: *A General Accounting Office Report estimates that it will cost \$725 million per year to implement ICBEMP, while the Supplemental Draft EIS estimates it will cost \$137 million per year. Which figure is correct?*

Response: The General Accounting Office Report figure refers to a fire program analysis which estimated the amount of funding necessary to decrease fuel loads in the region. This figure can not be directly compared to the implementation of the Supplemental Draft EIS for ICBEMP.

The Supplemental Draft EIS was crafted to respond to varying funding levels. These are displayed and analyzed in Chapter 4 of the Final EIS.

Comment: *How much money was spent on the project and where did it come from?*

Response: The BLM and Forest Service have spent approximately \$52 million since 1994 on the Scientific Assessments and the development of the management direction in the Draft EISs, Supplemental Draft EIS, Final EIS, and the Report to Congress.

Table 1. ICBEMP Meetings, Briefings, and Consultations, March–November, 2000

Date	Location	Contact/Meeting/Briefing
February 2	Portland, Oregon	US Army Corps of Engineers / Federal Caucus public hearing
February 8	Spokane, Washington	US Army Corps of Engineers / Federal Caucus public hearing
February 10	Lewiston, Idaho	US Army Corps of Engineers / Federal Caucus public hearing
February 14	Boise, Idaho	Society for Range Management
February 17	Richland, Washington	US Army Corps of Engineers / Federal Caucus public hearing
February 23	Boise, Idaho	US Army Corps of Engineers / Federal Caucus public hearing
February 29	Seattle, Washington	US Army Corps of Engineers / Federal Caucus public hearing
March 1	Kalispell, Montana	US Army Corps of Engineers / Federal Caucus public hearing
March 2	Missoula, Montana	US Army Corps of Engineers / Federal Caucus public hearing
March 7	Idaho Falls, Idaho	US Army Corps of Engineers / Federal Caucus public hearing
March 8	Twin Falls, Idaho	US Army Corps of Engineers / Federal Caucus public hearing
March 13	Portland, Oregon	Congressional staff, local government
March 15	Boise, Idaho	Congressional staff, local government, Lower Snake RAC
March 16	Spokane, Washington	Congressional staff, local government
March 22	Boise, Id / Helena, Mt	Montana Governor's Office conference call
March 23	Missoula, Montana	Upper Columbia Clearwater-Salmon Resource Advisory Council
March 23	Missoula, Montana	Congressional staff, local government, Butte Resource Advisory Council
April 5	Salem, Oregon	Oregon Governor's Office
April 13	Ontario, Oregon	Southeast Oregon Resource Advisory Council
April 14	Lewiston, Idaho	Forest Products Industry
April 18	Salmon, Idaho	Public Meeting
April 18	Salmon, Idaho	Lemhi County Commissioners
April 18	Walla Walla, Wash.	Public Meeting
April 19	Missoula, Montana	Public Meeting
April 20	Kalispell, Montana	Public Meeting
April 24	John Day, Oregon	Public Meeting
April 24	Libby, Montana	Public Meeting
April 25	Lakeview, Oregon	Public Meeting
April 25	Coeur d'Alene, Idaho	Public Meeting
April 26	Boise, Idaho	Public Meeting
May 1	Spokane, Washington	Eastside Ecosystem Coalition of Counties
May 1	Spokane, Washington	Spokane Area Chamber of Commerce
May 1	Okanogan, Washington	Public Meeting
May 2	Colville, Washington	Public Meeting
May 3	Bend, Oregon	Public Meeting
May 4	Pocatello, Idaho	Public Meeting
May 5	Idaho Falls, Idaho	Briefing, Upper Snake River Resource Advisory Council
May 15	Colville, Washington	Public Hearing
May 16	Seattle, Washington	The Wilderness Society, The Mountaineers, Earth Justice
May 17	Olympia, Washington	Washington Governor's Office
May 18	Boise, Idaho	National Association of Counties meeting
May 30	Portland, Oregon	Conservation groups
May 31	Eureka, Montana	Tobacco Valley Study Group
June 13	Boise, Idaho	Eastside Ecosystem Coalition of Counties
June 22	Boise, Idaho	Lower Snake River Resource Advisory Council
June 29	Washington, D.C.	U.S. Senate Energy and Natural Resources Committee Hearing

Appendix 6

Terrestrial and Aquatic Species

Appendix 6 of the Supplemental Draft EIS is incorporated by reference, in accordance with 40 CFR 1500.4(j) and (o), 1502.21 and 1506.4. The incorporated material can be found on pages 6-1 through 6-52 in Volume 2 of the Supplemental Draft EIS. The content is briefly summarized below, with changes based on public comment and internal review following the summary.

Summary

This appendix provides several lists of species referred to in this EIS. These lists include:

- ♦ threatened, endangered, proposed, and candidate species;
- ♦ sensitive vertebrates and plants;
- ♦ vascular plants used to evaluate the alternatives;
- ♦ terrestrial vertebrates used to evaluate the alternatives;
- ♦ broadly distributed plants;
- ♦ vertebrates not analyzed;
- ♦ vascular plants with a Natural Heritage rank of G1-G3 and non-vascular plants with a rank of S1-S3; and
- ♦ vertebrates affected by roads.

Modifications Made to ICBEMP Supplemental Draft EIS Appendix 6

Page/Column/Paragraph or Table/Fig/Map/Photo	Change Made (bold = new; strikeout = delete)
6-3/Table 1/Threatened Species	<p>Revise: Threatened (16 19 spp.)</p> <p>Revise: Bull trout (Columbia River)</p> <p>Insert: Canada Lynx (moved from Proposed Species)</p> <p>Insert: Northern Idaho ground squirrel (moved from Proposed Species)</p> <p>Insert: Columbia Chum Salmon No Yes</p>
6-3/Table 1/Endangered Species	<p>Revise: Endangered (19 18 spp.)</p> <p>Delete: Bull trout (Klamath River)</p>
6-3/Table 1/Proposed Species	<p>Revise: Spalding's catchfly (PE PT)</p> <p>Delete: Canada lynx (PT) (moved to Threatened Species)</p> <p>Delete: Northern Idaho ground squirrel (PT) (moved to Threatened Species)</p> <p>Insert: Showy stickseed (PE) (moved from Candidate Species)</p> <p>Insert: Coastal Cutthroat Trout (PT) No No</p>
6-3/Table 1/Candidate Species	<p>Revise: Candidate (10 9 spp.)</p> <p>Delete: Showy stickseed (moved to Proposed Species)</p>
6-4/Table 2/Mammals	Revise: kit fox <i>Vulpes velox macrotis</i>
6-21/Table 3/Class M	Revise: kit fox <i>Vulpes velox macrotis</i>

Appendix 7

Socio-Economic Information for Counties and Communities

Appendix 7 of the Supplemental Draft EIS is incorporated by reference, in accordance with 40 CFR 1500.4(j) and (o), 1502.21 and 1506.4. The incorporated material can be found on pages 7-1 through 7-52 in Volume 2 of the Supplemental Draft EIS. The content is briefly summarized below, with changes based on public comment and internal review following the summary.

Summary

This appendix provides information on several economic and social attributes of the counties and communities within the Interior Columbia Basin Ecosystem Management Project area. It is made up of six tables.

Table 1 lists more than 500 communities within the project area, along with the county, RAC/PAC area, and subbasin (by name and number) in which they are located.

Table 2 shows full- and part-time employment by county and the percentage of employees in each employment sector (such as mining or agricultural services, forestry, and fishing).

Table 3 provides information by county on population, employment and unemployment, per capita income and poverty rates, percent federal ownership, federal share of the supply of timber and forage for livestock grazing, federal revenue-sharing payments as a proportion of county budgets, and measures of economic diversity and socio-economic resiliency.

Table 4 shows percentages of primary race and ethnic populations by county.

Table 5 includes population figures (where available) for more than 500 communities, degree of isolation from larger towns and trade centers, presence of nearby American Indian reservations, presence of Forest Service or BLM offices, and percent of land within a 20-mile radius that is managed by the Forest Service or BLM.

Table 6 shows the degree of economic specialization in 12 economic sectors for more than 400 communities within the project area, which is based on the sector average for the Bureau of Economic Analysis trade area within which a community lies.

Modifications Made to ICBEMP Supplemental Draft EIS Appendix 7

Page/Column/Paragraph or Table/Fig/Map/Photo	Change Made (bold = new; strikeout = delete)
7-16, 18/Table 2/5 th column	Revise: Agricultural Sevices Services
7-16, 18/Table 2/9 th column	Revise: Transprotation Transportation
7-19, 20, 21 / Table 3	Revise: the five Footnote 5 (⁵) references in the header to Footnotes 5-9 (⁵⁻⁹) , sequentially, and Footnote 6 (⁶) to Footnote 10 (¹⁰) .
7-20 / Table 3/ 4 th line from bottom	Revise: OR Walla-Walla Wallowa
7-21 / Table 3	<p>Replace: Existing Footnote 5 on page 7-21 with the following:</p> <p>⁵ BLM/FS Lands % = percentage of county land area administered by the BLM or Forest Service.</p> <p>⁶ FS/BLM Timber Supply % = amount of timber produced within the county coming from FS- or BLM-administered lands.</p> <p>⁷ FS/BLM Forage Supply % = amount of livestock forage produced within the county coming from FS- or BLM-administered lands.</p> <p>⁸ Federal Lands Payment % = percentage of the county budget (in the early 1990s) derived from federal revenue-sharing payments based on FS- or BLM-administered lands.</p> <p>⁹ Based on Shannon-Weaver Diversity Index using employment data.</p> <p>Replace: ⁶ with ¹⁰ Horne and Haynes, 1999.</p> <p>Insert at end of footnotes: Note: For specific references and additional information for Footnotes 5-9 above, see the Upper Columbia River Basin Draft EIS (1997), Table 2-16 for Idaho and Montana counties; and the Eastside Draft EIS (1997), Tables 2-22 and 2-23, for Oregon and Washington counties.</p>
7-22 / Table 4/3 rd column/ 1 st row	Revise: percent: 97 97.0
7-31, 32, 33, 34, 35/Table 5	Revise: All the Tri-Cities footnote numbers: ² to ⁶ (there are 24 occurrences throughout these pages)

Appendix 9

Additional Aquatics Guidance and USFWS and NMFS Matrices

Appendix 9 of the Supplemental Draft EIS is incorporated by reference, in accordance with 40 CFR 1500.4(j) and (o), 1502.21 and 1506.4. The incorporated material can be found on pages 9-1 through 9-58 in Volume 2 of the Supplemental Draft EIS. The content is briefly summarized below, with changes based on public comment and internal review following the summary.

Summary

The information in this appendix supports and guides the objectives and standards in Chapter 3 and is not intended to stand alone.

The first section of this appendix describes one component of the aquatic and riparian strategy for Alternative S1: Riparian Management Objectives (RMOs). The second section describes the Sediment Delivery Influence Area used in Alternative S2 and S3. The last section contains the U.S. Fish and Wildlife Service and National Marine Fisheries Service Matrices of Pathways and Indicators used as an interim procedure to determine project consistency until Watershed Condition Indicators are developed (see Chapter 3 for more information). These matrices were combined for the Final EIS to facilitate their use in project design and evaluation within the National Environmental Protection Agency (NEPA) analysis and decision-making process.

Modifications Made to ICBEMP Supplemental Draft EIS Appendix 9

Page/Column/Paragraph or
Table/Fig/Map/Photo

Change Made (bold = new; strikeout = delete)

9-4/right

Revise second to last sentence: These relationships should use the best available scientific information **and the resultant documentation should adequately describe field application and methodology.**

9-6

Replace pages 9-6 through 9-58 with the following:

ICBEMP Interim Implementation Tool—Modified USFWS/ NMFS Matrix

Overview

Until watershed condition indicators (WCIs) are developed, the interim implementation procedure (modified matrix) in combination with cumulative effects analysis, National Environmental Policy Act (NEPA), Ecosystem Analysis at the Watershed Scale (EAWS; where available), or Subbasin Review, shall be used to help establish an environmental baseline of aquatic resource and watershed condition. Effects of actions shall be evaluated against this baseline to determine consistency with aquatic, riparian, and hydrologic objectives in the ICBEMP Record of Decision. Actions that could negatively affect fundamental physical and ecological processes within a watershed in the long term (more than 10 years) shall be redesigned to be consistent with the aquatic, riparian, and hydrologic objectives.

This interim implementation procedure is to be applied during the NEPA process to facilitate project(s) design and evaluation. Evaluations may be conducted at the site level, at the subwatershed level (6th-field HUC) or at the watershed level (5th-field HUC), depending on the geographic extent and scope of the proposed action(s), and the scale at which cumulative effects need to be addressed. In any case, the environmental baseline at the subwatershed or watershed scale is the context in which the NEPA analysis of a single action or groups of actions is compared.

None of the concepts or elements used to develop this procedure are new inventions. This multi-scale assessment and evaluation has been adapted from a previous version of a matrix developed by the U.S. Fish and Wildlife Service (USFWS) and the Forest Service: the matrix developed by the National Marine Fisheries Service (NMFS) to determine the effects of actions on listed anadromous fish species and consistency with the ecological goals in PACFISH and the Biological Opinion on LRMP for the eight National Forests in Idaho and eastern Oregon (NMFS, March 1995); and the modified matrix developed by interagency personnel to evaluate consistency of actions with the Aquatic Conservation Strategy (ACS) and to determine effects relative to the Northwest Forest Plan ACS Objectives. The standards and objectives that constitute the aquatic, riparian, and hydrologic component of Alternatives S2 and S3 in the ICBEMP

strategy are founded on the principles of the ACS for Northwest Forest Plan. It is important to note that this procedure will not result in Endangered Species Act determinations of effect for proposed projects. However, one use of the information obtained from these evaluations can be the incorporation of the information into the subsequent biological assessments that address potential site-specific effects of proposed activities for Endangered Species Act (ESA) determinations.

This two-part evaluation procedure consists of: 1) a matrix table of ecological factors and a suite of integrated indicators, and 2) a checklist for documenting the environmental baseline and effects of the proposed action(s) on the relevant indicators. This procedure is a decision support tool that can assist the land manager in identifying how management actions may potentially influence the conditions and trends of important variables or ecological factors relative to aquatic, riparian, and hydrologic components. The evaluation of an integrated suite of indicators provides a consistent, logical line of reasoning to recognize when and where adverse effects may occur, and why they may occur. It should be noted that this procedure considers the suite of indicators and not individual indicators. Results from the evaluation of the suite of indicators can be used to complete the design of current, proposed activities to avoid adverse impacts and initiate restoration of degraded conditions. This procedure does not replace EAWS. Application of this procedure will help decision makers arrive at an ecologically defensible and trackable determination of the effects of proposed actions relative to aquatic, riparian, and hydrologic objectives in Alternative S2 or S3 of the ICBEMP strategy.

This procedure is designed to be applied through telescoping ranges of scale and over a wide range of environmental conditions, which means it must be flexible. It also means that a certain degree of professional judgement will be required in its application.

Description of the Matrix

The objective of the "Matrix of Factors and Integrated Suite of Indicators" (Table 1) is to integrate the physical habitat conditions to evaluate the potential affects of land management activities in attaining the desired outcomes expected from implementing the aquatic, riparian, hydrologic management direction. This matrix is divided into six overall ecological factors (major rows in the matrix): water quality, habitat access, habitat elements, channel condition and dynamics, watershed conditions, and flow/hydrology.

Each factor represents a significant diagnostic pathway of ecological factors that influence aquatic, riparian, and hydrologic variables that are known to create and maintain good aquatic and riparian habitat conditions. Integration of the conditions for these factors provides the environmental baseline (current condition) of the habitat, and how those conditions may be affected (beneficially or adversely) as a result of an activity(ies). The factors are further broken down into "indicators" and conditions are evaluated in terms of the entire

Modifications Made to ICBEMP Supplemental Draft EIS

Appendix 9 (Continued)

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integrated suite of indicators and not on individual indicators. The indicators are generally arranged from a finer to a broader scale. For example, under the factor "Habitat Elements," the indicators refer to information from the reach level, (substrate embeddedness), to the grouped reach level (large woody debris, pool frequency and quality, large pools), to the entire stream length (off-channel habitat), and finally the complete watershed (refugia).

Conditions of the indicators are generally reported in one of two ways: (1) quantitative metrics that have associated numeric values (for example, "six pools per mile"); and (2) qualitative descriptions (for example, "adequate habitat refugia do not exist"). It is essential that each ecological factor be addressed using an integrated approach and the purpose of having both types of indicators is that numeric data are not always readily available (or there are no reliable numeric indicators for the factor under consideration). In this case, a description of overall condition may be the only appropriate method available. There will be circumstances where the numeric values or qualitative descriptions for indicators in the matrix simply do not apply to a specific watershed, are unavailable, or exist in a different format. In such a case, a more ecologically appropriate indicator and values can be provided using local data when available, including data sources and techniques used. This substitution will require providing adequate documentation and rationale to justify changes or deletions to the factors and indicators.

The columns in the matrix correspond to levels of condition of the indicator. There are three condition levels: "properly functioning," "at risk," and "not properly functioning." For each indicator, there is either a numeric value or range for a metric that describes the condition, a qualitative description of the condition, or both. When a numeric value and a description are combined in the same cell in the matrix, it is because accurate assessment of the indicator requires attention to both. *The numeric values are not presented as absolute values.* They are presented as diagnostic tools to promote discussion of differences between local data or findings and values suggested in the matrix. Regardless of data availability for each indicator, proposed management activities will be designed to minimize long term impacts to ecological processes which are represented by that indicator.

If a numeric indicator suggested in the matrix is not functionally attainable given the inherent characteristics of the watershed being considered or if an equivalent value is available using a different field technique, the numeric value should be replaced with local data and professional judgement. When this occurs adequate documentation complete with supportive local data and the technique used to compile the data, and/or scientifically supported reasoning, logic, or professional judgement for the change must be included in the

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evaluation. Likewise, if not all indicators listed within an ecological factor are used, defensible and trackable documentation on why an indicator was not considered must be included.

Description of the Checklist

The “Checklist for Documenting Environmental Baseline and Consistency of Proposed Action(s) on Relevant Indicators” (Table 2) is designed to be used in conjunction with the matrix. The checklist has six columns. The first three describe the condition of each indicator (which when taken together encompass the environmental baseline and condition of the aquatic, riparian, and hydrologic variables), and the second three describe the effects of the proposed action(s) on each indicator. As with the matrix, documentation and rationale must be provided to support each checklist selection.

How to Use the Matrix and Checklist

The matrix and checklist are used together to help design projects.

For each watershed, determine the environmental baseline by describing the conditions for the measurable indicators listed under ecological factors. This will result in each indicator in Table 1 being classified as either: “Properly Functioning” (PF), “At Risk” (AR), or “Not Properly Functioning” (NPF). The values used to determine PF and NPF should be based on local data collected over time for the indicator that are representative of the physiographic characteristics of the watershed.

Using Table 2, evaluate an action (or groups of actions) by comparing the environmental baseline against the expected effects of the action(s) on the indicators. Where conditions are AR or NPF, actions that affect indicators that are not fully functioning should be designed to improve conditions and processes (through active or passive measures) so indicators are PF in the long term. Where conditions are PF, design the action(s) to maintain those conditions.

Regardless of current conditions actions that would result in short-term impairment of any indicator should be redesigned, unless the short-term impairment of one or more indicators would result in long-term benefits for the affected and other indicators.

Examples: using the attached example tables (intent is to avoid the “go/no go” scenarios)

Example 1. Thinning and prescribed fire are proposed as a vegetation treatment. Current large woody debris is 30 pieces per mile, below the Properly Functioning value of 50. Assuming the values for a PF call are appropriate for the physiographic area, the proposed activity will need to be designed in such a way that desired conditions would be reached and lead to attainment of Properly Functioning conditions over the long-term. At the stream reach level, site-specific project design features to promote PF conditions might include increased RCA widths, adjustment of the treatment unit

Modifications Made to ICBEMP Supplemental Draft EIS Appendix 9 (Continued)

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boundaries, or changes in how the specific treatment tool (prescribed fire ignitions or mechanical thinning) is implemented.

Example 2. The action is to replace a damaged culvert. Current large woody debris value is 30 pieces per mile, below the Properly Functioning Value of 50. This activity would not affect the condition of the large woody debris indicator. Assuming implementation of the action would not degrade functionality of other indicators over the long-term, the activity could proceed without additional design modifications.

Table 1. Example for ABC Physiographic Area Matrix of Factors and Suite of Integrated Indicators.

FACTORS	INDICATORS	PROPERLY FUNCTIONING (PF)	AT RISK (All situations not described as PF or NPF)	NOT PROPERLY FUNCTIONING (NPF)
Water Quality	Temperature (7 Day Max. Avg.)	≤ 64 Degrees F		≥ 70 Degrees F
	Turbidity	Frequency and duration similar to unimpacted streams in basin		Frequency and duration higher than unimpacted streams in basin
	Chemical Contamination/ Nutrients	No biological evidence of chemical contamination		Obvious biological evidence of chemical contamination, for example, fish kills
Habitat Access	Physical Barriers	No human-created barriers in watershed that inhibit upstream passage of any life stage of salmonid to its historical habitat		One or more human-created barriers that prevent upstream passage of any life stage of salmonid to its historical habitat
Habitat Elements	Substrate/ Sediment	$\geq 30\%$ gravel in riffles and very little embeddedness		$\leq 10\%$ gravel in riffles and embedded
	Large Woody Debris (LWD)	≥ 50 pieces/mile, 24" dia., 50' long, no evidence or record of stream clean out or management related debris flows		≤ 15 pieces/mile, 24" dia., 50' long, evidence or record of stream clean out or management related debris flows
	Pool Area %	$\geq 55\%$		$\leq 40\%$
	Pool Quality	Residual pool depth ≥ 0.5 m or 20% pools deeper than 1 m.		Residual pool depth ≤ 0.2 m or 10% pools deeper than 1 m.
	Off-channel Habitat	Frequent backwaters with cover, and low energy off-channel areas (ponds oxbows, etc.)	Some backwaters and high energy side channels	No backwaters, nor off-channel ponds.
Channel Condition and Dynamics	Width/depth ratio (in wetted riffles)	< 15	15 - 30	> 30
	Streambank Condition	Relatively stable banks. Few or no areas of active erosion.	Moderately stable banks. Some active erosion occurring on outcurves and constrictions.	Highly unstable stream banks. Numerous areas of exposed soil and stream bank cutting.
	Floodplain Connectivity	Logjams and other features create pools and secondary channels, which trap debris and food and maintain a high water table that provides cool late-season flows. Floodplain well vegetated.		Secondary channels lacking. Unconstrained main channel often down cut to bedrock and relatively short, without pools, meanders, and food. Warm low late-season flows.

Table 1. Example for ABC Physiographic Area Matrix of Factors and Suite of Integrated Indicators. (Continued)

FACTORS	INDICATORS	PROPERLY FUNCTIONING (PF)	AT RISK (All situations not described as PF or NPF)	NOT PROPERLY FUNCTIONING (NPF)
Watershed Condition	Road Density and Location/ Drainage Network	< 2 miles/square miles. No valley bottom roads.	2 - 3 miles/square miles. Some valley bottom roads.	> 3 miles/square miles. Many valley bottom roads.
	Disturbance History	Entire watershed with no concentration of disturbance in unstable or potentially unstable areas, and/or refugia, and/or riparian reserves; and for NWFP area (except Adaptive Management Areas), $\geq 15\%$ retention of LSOG in watershed.		Entire watershed with disturbance concentrated in unstable or potentially unstable areas, and/or refugia, and/or riparian reserves; does not meet NWFP standard for LSOG retention.
	Landslide Rates	No obvious increase in landslide rates caused from management related activities		> 2X natural rate of landslides, that appears to be management related.
	Riparian Reserves	The riparian reserve system provides adequate shade, large woody debris recruitment, and habitat protection and connectivity in all subwatersheds, and buffers include known refugia for sensitive aquatic species (> 80% intact).	Moderate loss of function (shade, LWD recruitment, etc.) of riparian reserve system, or incomplete protection of habitats and refugia for sensitive aquatic species (~70-80% intact).	Riparian reserve system is fragmented, poorly connected, or provides inadequate protection of habitats and refugia for sensitive aquatic species (<70% intact).

The ranges of values listed in the above table are for example only. Ranges of values for indicators that are based on actual data and are appropriate for the physiographic region will need to be identified by local units and interagency specialists.

Abbreviations used in this table:

F = Fahrenheit

dia = diameter

m = meter

NWFP = Northwest Forest Plan

LSOG = Late Seral Old Growth

LWD = large woody debris

Table 2. Checklist for Documenting Environmental Baseline and Effects of Proposed Action(s) on Relevant Factors and Indicators.

ECOLOGICAL FACTORS	ENVIRONMENTAL BASELINE			EFFECTS OF THE ACTION(S)		
	Properly ¹ Functioning	At Risk	Not Properly ¹ Functioning	Restore ²	Maintain ³	Degrade ⁴
<u>Water Quality:</u> Temperature						
Sediment						
Chem. Contam./Nut.						
<u>Habitat Access:</u> Physical Barriers						
<u>Habitat Elements:</u> Substrate						
Large Woody Debris						
Pod Area %						
Pod Quality						
Off-channel Habitat						
<u>Channel Cond. & Dyn.</u> Width/Depth Ratio						
Streambank Condition						
Floodplain Connectivity						
<u>Flow/Hydrology:</u> Peak/Base Flows						
Drainage Network Increase						
<u>Watershed Conditions:</u> Road Dens. & Loc.						
Disturbance History						
Landslide Rates						
Riparian Reserves						

Watershed Name:

Location:

¹ These three categories of function ("properly functioning", "at risk", and "not properly functioning") are defined for each indicator in the "Matrix of Pathways and Indicators" (Table 1).

² For the purposes of this checklist, "restore" means to change the function of an "at risk" indicator to "properly functioning", or to change the function of a "not properly functioning" indicator to "at risk" or "properly functioning" (that is, it does not apply to "properly functioning" indicators).

³ For the purposes of this checklist, "maintain" means that the function of an indicator does not change (that is, it applies to all indicators regardless of functional level).

⁴ For the purposes of this checklist, "degrade" means to change the function of an indicator for the worse (that is, it applies to all indicators regardless of functional level). In some cases, a "not properly functioning" indicator may be further worsened, and this should be noted.

Table 9-1: Aquatic Resource Inventory and Assessment (ARIA) on Relevant Factors and Resources

Project Area	Project Name	Project Description	Project Location	Project Dates	Aquatic Resource Inventory	
					USFWS	NMFS
Project Area 1	Project Name 1	Project Description 1	Project Location 1	Project Dates 1	USFWS	NMFS
					USFWS	NMFS
					USFWS	NMFS
					USFWS	NMFS
					USFWS	NMFS
					USFWS	NMFS
					USFWS	NMFS
					USFWS	NMFS
					USFWS	NMFS
					USFWS	NMFS
Project Area 2	Project Name 2	Project Description 2	Project Location 2	Project Dates 2	USFWS	NMFS
					USFWS	NMFS
					USFWS	NMFS
					USFWS	NMFS
					USFWS	NMFS
					USFWS	NMFS
					USFWS	NMFS
					USFWS	NMFS
					USFWS	NMFS
					USFWS	NMFS
Project Area 3	Project Name 3	Project Description 3	Project Location 3	Project Dates 3	USFWS	NMFS
					USFWS	NMFS
					USFWS	NMFS
					USFWS	NMFS
					USFWS	NMFS
					USFWS	NMFS
					USFWS	NMFS
					USFWS	NMFS
					USFWS	NMFS
					USFWS	NMFS

Appendix 10

Implementation

Framework

Appendix 10 of the Supplemental Draft EIS is incorporated by reference, in accordance with 40 CFR 1500.4(j) and (o), 1502.21 and 1506.4. The incorporated material can be found on pages 10-1 through 10-22 in Volume 2 of the Supplemental Draft EIS. The content is briefly summarized below, with changes based on public comment and internal review following the summary.

Summary

This appendix includes four main sections: The Nature of Decisions; Implementation Process; Monitoring, Evaluation, and Adaptive Management Framework; and Challenges to Implementation. Additional sections have been added on the Implementation Organization and Implementation Monitoring Program.

Modifications Made to ICBEMP Supplemental Draft EIS

Appendix 10

Page/Column/Paragraph or
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10-21/left/1st para

Insert before References section:

Implementation Organization

An organization will be formed to implement the Interior Columbia Basin Ecosystem Management Project (ICBEMP) plan after the Record of Decision (ROD) is signed and is intended to be fully functioning within a year. It will include a basin monitoring coordinator and interagency monitoring review teams. The overall role of the implementation organization is to support the implementation of the management direction and to promote basin-wide scientific research, data management, monitoring, and issue resolution.

The implementation organization will have several functions, including:

- ♦ provide guidance to the field units for the five interagency partners (Bureau of Land Management [BLM], Forest Service, Environmental Protection Agency [EPA], National Marine Fisheries Service [NMFS], and U.S. Fish and Wildlife Service [USFWS]) to interpret the ROD, and to identify training needs and opportunities.
- ♦ help develop methods to transfer information from the broad-scale ICBEMP level to finer-scale field levels, identify budget needs, and promote consistent application of the management direction.
- ♦ maintain basin- and regional-scale information systems and disseminate information to field units, interagency and intergovernmental partners, interest groups, and the public.
- ♦ monitor the implementation of the ROD, which should help identify any needed changes in management direction.
- ♦ evaluate, interpret, and provide advice on basin-wide data standards.
- ♦ promote methods to ensure the most current data is available to guide on-the-ground project design and monitoring.
- ♦ address differences in interpretation of the management direction.

The following criteria will be used to create, evaluate, and manage the implementation organization:

- ♦ Build on the strengths and accountability mechanisms of the BLM, Forest Service, EPA, NMFS, and USFWS.
- ♦ Augment basin-wide staff within the five agencies only when needed to accomplish critical basin-wide tasks. All other tasks should be accomplished through existing organizations.
- ♦ Establish mechanisms to efficiently resolve interagency conflict, facilitate the timely incorporation of new scientific information, make interagency decisions at all levels of the organizations, and assure adherence to the intent of the ROD.

- ♦ Improve interagency and interregional coordination and collaboration to promote effective and efficient implementation at all organizational levels.
- ♦ Provide guidance to promote consistency in management direction implementation, monitoring, and adaptive management.
- ♦ Promote equitable sharing of costs among involved agencies and allow for flexibility to expand or contract the implementation organization to accommodate fluctuations in funding and management emphasis.
- ♦ Manage project-wide data needs at the appropriate scale and promote effective linkages to other data levels (scales).
- ♦ Provide encouragement, support, and consistent interpretation and delivery of concepts and direction to all field organizational levels.
- ♦ Provide incentives and recognize field unit accomplishments.

Implementation Monitoring Program

Objectives

The ICBEMP intent is to evaluate broad-scale monitoring data every five years to determine if the ROD is being implemented and if management practices are leading to achievement of broad-scale goals and objectives.

Monitoring and evaluation are necessary to achieve the short- and long-term goals of the management direction. Implementation monitoring determines whether planned activities have been implemented and whether the standards and objectives were followed. Implementation monitoring serves as an important anchoring point upon which to apply effectiveness monitoring and adaptive management. Separate effectiveness monitoring and adaptive management plans will be prepared and released after the Record of Decision is signed.

The implementation monitoring program for this EIS will:

- ♦ Establish a suite of monitoring questions that directly relate to the standards and objectives.
- ♦ Develop measurable indicators to address the monitoring questions.
- ♦ Create a definition or vision of “successful” implementation.
- ♦ Use statistically sound procedures for answering the monitoring questions (where appropriate).

Participants

The Executive Steering Committee (ESC) will provide broad oversight regarding the implementation monitoring program, formally approving and identifying issues/concerns to be reviewed each year, and will establish priorities for implementation monitoring.

Modifications Made to ICBEMP Supplemental Draft EIS

Appendix 10 (Continued)

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The implementation organization will include a basin monitoring coordinator and interagency monitoring review teams. The monitoring review teams, formed annually on an *ad hoc* basis, will manage the ROD implementation monitoring program. This includes developing implementation questions, an unbiased sampling program, and standardized evaluation methods. These teams will conduct field reviews, synthesizing the results into reports. The basin monitoring coordinator will compile the reports into an annual basin implementation report and present it to the ESC. The coordinator will also help the ESC communicate the results of the annual reviews to the field units and guide the application of any direction resulting from the report.

The involved agencies will work with other federal and state agencies, advisory councils, state and local governments, tribes, and other stakeholders to identify concerns regarding implementation of the ROD. Involved agency field units will provide the basin monitoring coordinator and monitoring review teams with the information needed to support that year's annual implementation monitoring program, and will help share the results of implementation monitoring with the public. Field units will also provide staff to serve on the monitoring review teams.

Actions

The following sequence of implementation monitoring will occur annually (see timeline on page 10-10):

1. Concerns with implementing the ROD will be identified at all levels of the involved agencies and through consultation with state, local, and tribal governments; and Resource Advisory Councils and Provincial Advisory Committees. These concerns will be provided to the basin monitoring coordinator, who will summarize the concerns and recommend which ones should be presented to the ESC for further action.
2. The ESC will review and prioritize the list of concerns to be addressed that year. The basin monitoring coordinator and monitoring review teams will use the list to develop a set of monitoring questions to be addressed. These questions will then be applied to a randomly selected sample of related projects and activities throughout the ICBEMP project area.
3. The monitoring review teams will evaluate the selected activities/projects, summarize their findings, and provide the findings to the basin monitoring coordinator. The coordinator will synthesize that year's implementation monitoring activities into an annual basin implementation report.

4. The annual basin implementation report will be presented to the ESC with a summary of the previous year's implementation progress and recommended corrective actions.
5. The ESC may determine that additional monitoring is necessary for a particular concern addressed in a previous year's report. This additional monitoring would be included in the current year's sampling program and basin implementation report.

Selecting Activities

The overall process for selecting which activities, projects and processes to monitor involves four steps: collect concerns; develop questions; identify the kinds of land use activities or projects to be sampled; and select the specific activities or projects to be sampled.

Criteria for selecting the concerns include:

- ♦ Is the project/activity of concern a result of or affected by implementation of the ROD?
- ♦ Is there sufficient interest in the concern to warrant review?
- ♦ Can implementation monitoring questions be developed that lead to a clear answer as to whether or not the management direction was followed?

The next stage involves defining the sampling population for projects or activities. Some projects/activities, such as timber sales or road reconstruction, are site-specific and can be readily defined and listed. Other activities, such as dispersed camping in riparian areas and livestock grazing, are not as site-specific, and therefore, more difficult to define and list. However, both types of actions can be sampled using a *stratified random sample* approach.

For example, if timber sales are of concern, the first step is to define the sample *population* of timber sales. The population is all the active sales in the ICBEMP project area since the ROD was signed. Then, depending upon the concern, additional selection strata may be added (for example, there may only be a concern with "large" sales).

When all the qualifiers defining the population are agreed to, the basin monitoring coordinator will ask field units to submit a list of projects meeting the criteria. Once a list is developed, sampling intensity will be decided (that is, how many projects must be evaluated) so that a determination of compliance can be reached. This sampling intensity will vary with concern sensitivity and the types of projects or activities being evaluated. The most important aspect of the sampling process is that a non-biased selection of projects and activities is achieved.

Modifications Made to ICBEMP Supplemental Draft EIS
Appendix 10 (Continued)

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	<i>Potential Monitoring Questions</i>
	The following questions are examples. They will be further refined as the monitoring plan is finalized.
	Subbasin Review
	<ul style="list-style-type: none">♦ Was a Subbasin Review conducted for the area?♦ Was the Subbasin Review Guide followed?♦ Was the subbasin identified as a high restoration priority subbasin? If yes, was Subbasin Review completed within three years of the signing of the ROD?♦ If a Subbasin Review was completed, was it used to:<ul style="list-style-type: none">- prioritize and provide context for EAWS?- identify the schedule for completing EAWS in high restoration priority subbasins?- identify opportunities for future activities and land use plan amendments/revisions?- provide context for assessing cumulative effects?- identify data gaps?- identify opportunities to pool resources?♦ If no Subbasin Review has been completed, and the subbasin has less than five percent BLM/Forest Service ownership, did the agency(ies) initiate collaboration with tribal governments, the U.S. Fish and Wildlife Service, National Marine Fisheries Service, and Environmental Protection Agency to discuss the general condition of resources, the potential to reduce risks, and other ecosystem management issues?
	Ecosystem Analysis at the Watershed Scale (EAWS)
	<ul style="list-style-type: none">♦ Has an EAWS been completed for the watershed in which the activity/concern is located?♦ Was the <i>Federal Guide for Watershed Analysis</i> (Regional Inter-agency Executive Committee 1995) followed? Was there inter-agency and tribal government coordination?♦ If EAWS was completed, was it used to:<ul style="list-style-type: none">- address resource conditions, risks, and opportunities?- provide context and focus for site-specific NEPA analysis, decision-making, implementation, and monitoring?

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- assist with the estimation of direct, indirect, and cumulative effects?

- ♦ If no EAWS was completed, is there a potential for activities to negatively impact listed or proposed aquatic species or their habitats or the source habitats within T watersheds that have declined substantially in geographic extent from the historical to current period?

Adaptive Management

- ♦ Did the field unit conducting the program/activity of concern conduct implementation and/or effectiveness monitoring for the program/activity?
- ♦ If yes, were the results of monitoring summarized and used to confirm expected outcomes or make recommendations for revisions to management strategies?

Road Management

- ♦ Has a roads analysis been completed in the area of interest?
- ♦ If yes, was it incorporated into or conducted concurrently with EAWS?
- ♦ Were affected tribes and/or local governments consulted during the roads analysis?
- ♦ Has an Access and Travel Management Plan or other transportation plan been developed or updated for the area?
- ♦ If a road was constructed, was it located outside riparian conservation areas (RCAs)? If within an RCA, what alternatives were considered prior to making the decision of where to locate the road? Was Endangered Species Act consultation conducted, if necessary, prior to construction?
- ♦ If a new road was constructed that crosses a stream, what mitigating measures were applied? Were fish passage and channel stability considerations built into the design on the crossing?
- ♦ Was the roads analysis used to set priorities for reducing the adverse effects of the road system in the area of interest? Have actions been undertaken to address those priorities?

Grazing Management

- ♦ Have all pasture/use areas been categorized according to condition, by allotment?
- ♦ Have monitoring areas been identified, by pasture/use area, and do they accurately represent riparian or stream channel conditions?

Modifications Made to ICBEMP Supplemental Draft EIS
Appendix 10 (Continued)

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- ♦ Have the following items been considered in developing grazing management systems to meet aquatic/riparian and terrestrial outcomes, by pasture/use area:
 - timing of livestock use
 - grazing intensity
 - frequency of grazing
 - duration of grazing
- ♦ Have management practices been prescribed to meet requirements of project-specific Endangered Species Act consultation?
- ♦ Was there a “no effect” determination on the pasture/use area/allotment?

Sampling Intensity Considerations

Sampling intensity can be adjusted if a review of the previous year’s results demonstrates that another approach is needed. The random sampling strategy may be adjusted to include additional field units that were not reviewed in previous years.

Budget realities must also be considered when determining the intensity of monitoring required for a particular concern. At the beginning of each fiscal year, agencies will agree to a preliminary implementation program budget. Once the concerns to be examined in the annual reviews are identified, various sampling options will be developed, with an estimated budget for each. The options and their costs will be presented to the ESC.

Field Review Expectations

1. The monitoring review teams will operate in an open forum that provides for exchange of ideas, information, and expertise.
2. Teams are encouraged to group project reviews for efficiency, and to conduct reviews that require no more than two days on a particular project, including time for field visits.
3. Each team will appoint a team leader who will coordinate schedules among the team and with field units, and facilitate completion of field reviews in the field season.
4. Teams and the basin monitoring coordinator are responsible for obtaining the necessary resources and background information from field units to adequately review the selected project or activity. This information must be made available by the field units for team review prior to the field visit. Information needed by the teams include project and activity NEPA documents, EAWS, and appropriate Subbasin Reviews.

5. The monitoring review teams will develop the questions to address the identified concerns and will use these questions to evaluate compliance with the ROD.
6. Following the field reviews, each team will prepare a written report summarizing the results of their review of each project/activity. The reports are to include:
 - A brief description of the project(s) or action(s) reviewed.
 - A list of monitoring questions and the responses.
 - Highlights of the process used in the review.
 - Findings and recommendations.
 - Overall assessment of project compliance with the ROD.
 - Identification of new topics for the following year or other follow-up actions.
 - A summary of program expenditures.

Analysis and Reporting Requirements

The basin monitoring coordinator will review all monitoring review team reports, assess overall compliance with the ROD, and prepare summary for the ESC on each concern that was evaluated. This summary can suggest ways to improve consistency of reports, identify weaknesses in the implementation monitoring process, make recommendations regarding needed changes in current management direction, or outline new management recommendations to improve future implementation of the ROD. The results of this review will become part of the annual implementation monitoring report, which will be presented to the ESC and be made available to involved agencies and the public.

The basin monitoring coordinator is also responsible to complete a multi-year report (every five years) summarizing the annual reporting data; make findings regarding progress and weaknesses; and state needs for adaptive management to correct deficiencies in implementation.

Relationship to Other Monitoring Activities

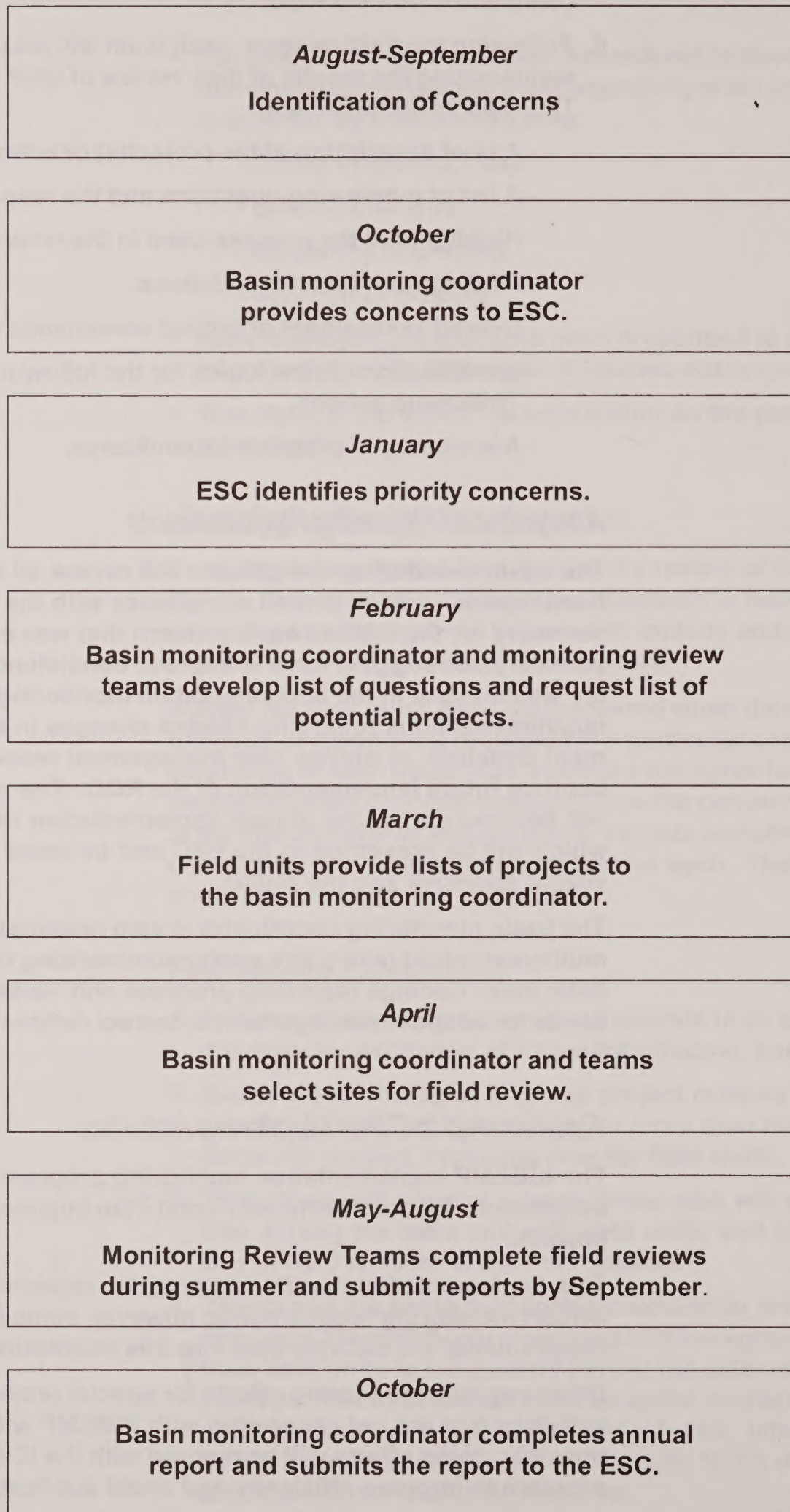
The ICBEMP implementation monitoring program is designed to be consistent with the Northwest Forest Plan implementation monitoring process.

This implementation monitoring program replaces the PACFISH/INFISH monitoring requirements; however, some PACFISH/INFISH requirements are incorporated into this monitoring program.

Other ongoing monitoring efforts for special projects and research activities that are not associated with ICBEMP will continue. Where possible, these efforts will be merged with the ICBEMP monitoring program to improve efficiency and avoid duplication.

Modifications Made to ICBEMP Supplemental Draft EIS Appendix 10 (Continued)

Annual Implementation Monitoring Time Line



Appendix 12

Requirements for Snags and Downed Wood

Appendix 12 of the Supplemental Draft EIS is incorporated by reference, in accordance with 40 CFR 1500.4(j) and (o), 1502.21 and 1506.4. The incorporated material can be found on pages 12-1 through 12-14 in Volume 2 of the Supplemental Draft EIS. The content is briefly summarized below, with changes based on public comment and internal review following the summary.

Summary

This appendix provides interim guidance for snags and downed wood, as directed in Objective B-O31, and Standards B-S28, B-S29, and B-S30.

Tables 1 through 4 provide interim numbers of large snags and levels of large downed wood (also referred to as coarse woody debris) by fire regime and potential vegetation group, for the project area and for each Resource Advisory Council/Provincial Advisory Committee (RAC/PAC) area. A prototype for refining snag numbers and coarse woody debris levels, along with a list of references are also in the appendix.

Modifications Made to ICBEMP Supplemental Draft EIS
Appendix 12

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12-3/Table 2	Revise: column heads: Snags/Acre to LDW/Acre , (LDW = Large downed wood)

Appendix 16

SAG Assumptions for Modeling the SDEIS Alternatives

Appendix 14 of the Supplemental Draft EIS is incorporated by reference, in accordance with 40 CFR 1500.4(j) and (o), 1502.21 and 1506.4. The incorporated material can be found on pages 14-1 through 14-28 in Volume 2 of the Supplemental Draft EIS. The content is briefly summarized below, with changes following the summary.

Summary

The Science Advisory Group (SAG) developed assumptions about the management direction in the Supplemental Draft EIS so they could better project

the potential effects of the alternatives. Included in this appendix are assumptions that clarified interpretation of direction, intent, and/or rationale; provided enough detail to derive outcomes for effects determinations for species of broad-scale concern; and described reasonable implementation for elements not fully described in the supplemental Draft EIS, such as implementation strategy, step-down processes, monitoring strategy, data management, and technology transfer.

The SAG also found it necessary to make several more assumptions to evaluate changes between Alternative S2 in the Supplemental Draft EIS and the modifications to Alternative S2 in the Final EIS. They are summarized in the table on the next page.

Modifications Made to ICBEMP Supplemental Draft EIS

Appendix 16

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Table/Fig/Map/Photo

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16-17/right/4th para

Insert after the 4th paragraph:

SAG found it necessary to make several assumptions for evaluating changes between the effects of Alternative S2 for the Supplemental Draft EIS and the revisions to Alternative S2 for the Final EIS. These are summarized below.

- ♦ The exemption from EAWS triggers as described in B-S5 (S2) revision, ["The only exceptions are where impacts are anticipated to be negligible, short term, and localized in scope or in the case where there is imminent threat to scarce natural resources, human life or property."], should have minimal impact on effects as analyzed for the Supplemental Draft EIS. SAG assumes activities covered by these exemptions will have small spatial extents (100s of acres) occurring over short time periods (yrs). Using the imminent threat exemption for activities covering larger areas or for longer time periods would change long-term effects compared to those projected for the Supplemental Draft EIS preferred alternative.
- ♦ Changing time frames for completing high priority restoration subbasin reviews as, described in BS-4 (S2), from two to three years following ROD approval, and from five years to seven years for completing all other subbasin reviews, will not likely affect the long-term outcomes estimated by SAG for the Supplemental Draft EIS. There may be a short-term delay in predicted broad-scale efficacy of management activities.
- ♦ The reduction in livestock grazing effects resulting from the application of guidelines, standards, and objectives for the Supplemental Draft EIS alternatives were outputs (authorized AUMs and uncharacteristic grazing) of the Supplemental Draft EIS effects analysis rather than assumed inputs. SAG had no rationale or information to use in assuming sharp future departure from current trends in analyzing the effects of the Supplemental Draft EIS alternatives. SAG analysis of the potential effects of additional restoration effort and deleterious grazing effects reduction in the sage grouse and Columbian sharp-tailed grouse ranges illustrates the potential effects of more dramatic changes in grazing impacts from those projected for the Supplemental Draft EIS Preferred Alternative (Hemstrom et al. 2000a, Wisdom et al. 2000b).
- ♦ SAG assumes wildfires are reoccurring events that can be widespread producing severe local impacts. For the Supplemental Draft

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EIS, SAG estimated an annual average of approximately 1 million acres burned in the short-term (10 years) under all three alternatives. In any 10-year period an average of 10 million acres are expected to burn. In any one year thousands to millions of acres would be expected to burn averaging 10 million in any 10-year period. Since neither the occurrence, location or effects of a fire can be predicted with any accuracy, there is no evidence that any of the wildfire episodes of the last 10-years were outside projections of Supplemental Draft EIS effects.

- ♦ SAG assumes that A2 watersheds will be actively restored fulfilling Objective A2-O2 (that is, “restore habitats supporting important native fish population centers while minimizing disruption to functioning hydrologic processes”). Consequently, the analysis of the effects of the Supplemental Draft EIS preferred alternative used landscape prescriptions that include prescribed fire, thinnings, suppression of wildfires etc. while minimizing disruptions to hydrologic processes. This is not a new assumption but a restatement of one used in the Supplemental Draft EIS effects analysis and is included to dispel confusion about the level of restoration intended for A2 areas in the Supplemental Draft EIS and how that intent was modeled by SAG. This differs from the objectives for A1 subwatersheds: “Conserve current aquatic and riparian habitats that support important native fish population centers” (Supplemental Draft EIS, Chapter 3, page 133, Objective A1-O1).
- ♦ The SAG assumed the Bureau of Land Management would use a roads analysis process similar to the one developed and used by Forest Service (USFS 1999).
- ♦ For the aquatic evaluation, SAG interpretation of the A2 objective (“Restore habitats supporting important native fish population centers...”) was that aquatic habitat restoration was the primary restoration emphasis in A2 watersheds since aquatic considerations were the basis for their identification and special management. Although restoration activities to achieve other activities could occur and could be beneficial for the aquatic population, they would be conservative (“low risk”) with respect to aquatic concerns, as stated in the objective. Thus, we would expect there would be lower levels of non-aquatic restoration in A2 watersheds than in non-A2 watersheds, particularly in priority restoration subbasins, and all restoration (including aquatic) in A2 watersheds would be done to minimally degrade aquatic habitats and populations.

Appendix 17a

Definitions for Old Forest

Appendix 17a of the Supplemental Draft EIS is incorporated by reference, in accordance with 40 CFR 1500.4(j) and (o), 1502.21 and 1506.4. The incorporated material can be found on pages 17a-1 through 17a-6 in Volume 2 of the Supplemental Draft EIS. The content is briefly summarized below, with changes based on public comment and internal review following the summary.

Summary

In October 1989, the Chief of the Forest Service directed all Regional Foresters to develop definitions for ecologically based old growth. This appendix discusses the definition and description of old-growth forests and references the old-growth definitions used by the Northern, Intermountain and Pacific Northwest regions of the Forest Service (approximately 300 pages total).

Modifications Made to ICBEMP Supplemental Draft EIS Appendix 17a

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Appendix 17a/17a-2/left/
1st para/2nd sentence

Revise: (The terms ~~“old growth”~~ and “old forest” and **“late seral forest”** are used synonymously in **Chapters 2 and 4** of the Interior Columbia Basin Ecosystem Management Project Environmental Impact Statement. The term ***old forest***, used in the management direction of Chapter 3, is based on the old growth definitions of the Forest Service Northern, Intermountain, and Pacific Northwest regions. The *Landscape Effects Analysis* chapter (Hemstrom et al. 2000) of the *SAG Effects Analysis* uses the term *late seral forest*. The *Landscape Dynamics* chapter (Hann, Jones, Karl, et al. 1997) of the *Assessment of Ecosystem Components* uses both terms in different places (for example, in Table 3.33 and Appendix 3_G in Volume 2 of the *Assessment of Ecosystem Components*). Forest structure definitions in Appendix 3_G include old forest but the definitions do not include information on forest age. They use classification of forest structure modified by O'Hara et al. (1996) from Oliver (1981) and define late seral forests as stands with at least 30 percent canopy cover of trees more than 20.9 inches diameter at breast height.

Quantitative estimates of the extent and amount of old forests (according to the definitions in Chapter 3 in the Supplemental Draft EIS) were not possible because of data limitations of the broad-scale ICBEMP data. Late seral forest conditions range widely from those that barely meet the minimum tree size and canopy cover requirements and contain very little downed wood and few or no large snags, to those containing trees that might be several centuries old and large for the site conditions, and may contain many large snags and large pieces of downed wood. However, they were considered to be adequate for use as a surrogate to disclose effects on old forest in Chapter 4, as they do provide minimum characteristics of old forest.

Project personnel have favored use...

Appendix 18

A1 and A2

Subwatershed

Update Process

Introduction

The Interior Columbia Basin Ecosystem Management Project (ICBEMP) provides an integrated management strategy to address aquatic, terrestrial, landscape and socio-economic issues. A critical piece of this integrated strategy is a system of A1 and A2 subwatersheds which is designed to anchor the recovery and viability of widely distributed native fishes by avoiding or reducing short-term risks to key populations and helping focus restoration of aquatic habitats. These areas are not static, long-term reserves but instead are dynamic and intended to respond to new information and changing conditions. What follows is a description of the aquatic/riparian/hydrologic component of the management direction and how the A1/A2 subwatersheds would be updated and changed in the future.

Aquatic/Riparian/ Hydrologic Component

The aquatic/riparian/hydrologic component of the ecosystem management strategy was developed to maintain and restore the ecological health of watersheds and aquatic ecosystems on Forest Service- and BLM-administered lands. The focus is on long-term aquatic species viability through conservation and restoration of watershed condition, water quality, and aquatic and riparian habitat, and addressing short- and long-term risks to these resources from management activities, as well as long-term risks from uncharacteristic natural disturbances. The management direction in Chapter 3 promotes the achievement of these objectives through a variety of methods.

Base-level aquatic/riparian/hydrologic direction includes management standards to prevent degradation to, and allow restoration of, riparian conservation areas (RCAs). Restoration direction includes both integrated (multiple resources) and functional (one resource) broad-scale restoration priorities and strategic guidance to achieve healthy, functioning landscapes and watersheds. The step-down direction also contributes to aquatic/riparian/hydrologic objectives through requiring multi-scaled analysis in which risks of disturbance and management opportunities are identified, and context for management activities are defined—including the maintenance and restoration of landscapes, watersheds, and aquatic habitats. Also within the step-down direction are monitoring and adaptive management requirements that detect desirable and undesirable changes so management actions can be modified or designed to achieve aquatic goals and objectives. The collaborative implementation structure promoted by the management direction will also assist in the consistent and appropriate interpretation and application of aquatic/riparian/hydrologic management direction.

Another critical component of the integrated aquatic/riparian/hydrologic strategy is the system of A1/A2 subwatersheds, which are designed to contribute to recovery and viability of widely distributed native fishes. The primary focus of the management direction for these subwatersheds is conservation and restoration while minimizing short-term risk from management activities.

As one piece of the overall strategy, the A1/A2 subwatersheds form an anchor for recovery and viability of widely distributed salmonids. Strategic restoration guidance, including broad-scale priorities, describes the importance of securing and/or restoring A1/A2 subwatersheds and describes the importance of extending favorable aquatic habitat conditions outward from A1/A2 subwatersheds through restoring adjacent or nearby subwatersheds. Riparian conservation area management would further extend favorable aquatic and riparian conditions over time. Overall, the A1/A2 subwatersheds, restoration direction and priorities, and RCA management direction, in combination with step-down processes and monitoring should contribute to a network of connected and productive aquatic habitats and move toward the goals of sustaining and restoring aquatic and riparian ecosystems and contributing to recovery and delisting of threatened and endangered species.

A1 and A2 Subwatersheds

The A1/A2 subwatersheds were identified using the following criteria:

- ♦ known strong populations for seven key salmonids (bull trout, steelhead trout, stream-type chinook salmon, ocean-type chinook salmon, westslope cutthroat trout, redband trout, and Yellowstone cutthroat trout);
- ♦ important anadromous fish populations in the Snake River Basin;
- ♦ genetically pure populations of anadromous fish outside the Snake River Basin;
- ♦ fringe populations for four of the key salmonids,
- ♦ percent of federal ownership within the subwatershed;
- ♦ percent of designated wilderness within the subwatershed; and
- ♦ road density

Since data are not available to characterize habitat quality, wilderness and road density serve as indicators of habitat condition and are the basis for distinguishing between A1 and A2 subwatersheds.

Aquatic habitats are largely at desired conditions in A1 subwatersheds, whereas A2 subwatersheds require restoration. The ICBEMP Record of Decision will define the roles, objectives, and final criteria used to delineate A1 and A2 subwatersheds. Map 3-11a shows the location of A1 and A2 subwatersheds, based on the broad-scale information and application of the revised criteria.

The broad-scale information in these criteria can be improved upon through the step-down process. Between the issuance of the Supplemental Draft EIS and the Final EIS, the data used to delineate the A1 and A2 subwatersheds were updated. The direction for the A1 and A2 subwatersheds will amend and take precedence over existing direction in the land use plans for BLM and Forest Service field units. This direction will guide future management until local information used during Subbasin Reviews or other mid- and finer-scale assessments refine the A1 and A2 subwatershed system.

Validating/Refining A1/A2 Designations Through Step-Down

The step-down process will validate and, as necessary, refine A1/A2 locations based on existing finer-scale information assembled through collaborative mid-scale assessments (for example, Subbasin Review) and planning efforts, as well as through finer-scale assessments such as EAWS. Information used in the step-down process would be compared with A1/A2 objectives and criteria to determine more precise locations and boundaries. For example, finer-scale information about strong fish populations may indicate that an area within a particular subbasin should be added to or removed from the A1/A2 system. Local habitat quality information would also be used to better discriminate between A1 and A2 designations. Such “fine-tuning” of A1/A2 delineations using Record of Decision definitions does not constitute a new decision warranting plan amendment or associated NEPA analysis. It implements the decision in the ROD to designate A1/A2 areas meeting the defined criteria and intent. Language clarifying this expectation will be included in the Record of Decision. The recent update of information on species’ status and distribution should reduce the likelihood of substantial changes within a particular subbasin (for example, adding or removing several A1/A2 subwatershed designations). If substantial shifts do occur, it may be necessary to analyze and disclose effects through the appropriate land use plan amendment and NEPA analysis procedures, and conduct any necessary ESA consultation procedures (see Appendix 18 in the Final EIS).

Extending Favorable Conditions to Meet Overall Aquatic/Riparian/Hydrologic Objectives

During ICBEMP plan implementation, it is anticipated that aquatic restoration activities will

initially focus on A2 subwatersheds, using low-risk approaches. However, securing populations in subwatersheds may necessitate restoring subwatersheds upstream and downstream from a stronghold even though such areas may not be designated as A1 or A2 subwatersheds. Providing connectivity and distribution of populations and habitat, creating a dynamic system of productive habitats responsive to future changes in condition from disturbances, and meeting other aquatic/riparian/hydrologic objectives will similarly necessitate restoring and securing areas outside current A1/A2 subwatersheds. Such needs can be identified and actions planned and accomplished without need of formally designating these areas as an A1 or A2 subwatershed.

The step-down process would again be the basis for determining these needs. Subbasin Review and EAWS would identify needs (based on resource status and risks) and opportunities and set priorities for extending favorable conditions to meet associated aquatic/riparian/hydrologic objectives. Land use direction considered necessary to achieve these favorable conditions beyond A1/A2 subwatersheds or Riparian Conservation Areas may be found to conflict with existing land use plan direction. In such cases, appropriate plan amendment and NEPA analysis procedures would be followed and Endangered Species Act consultation would occur as necessary. As subsequent projects are designed, that also will be subject to NEPA compliance and Endangered Species Act consultation requirements.

Monitoring

The Implementation and Effectiveness Monitoring Strategies being developed for ICBEMP will include questions relevant to aquatic/riparian/hydrologic objectives. Specific to the A1/A2 component, monitoring will help ensure general consistency in system adjustments from subbasin to subbasin; provide broad-scale oversight for mid- and fine-scale adjustments, especially for more widely distributed aquatic species; and facilitate adaptive management of the system. Monitoring questions can be designed to determine whether A1/A2 areas have been validated through mid- and finer-scale assessment or planning processes, whether A1/A2 direction is being followed, and whether the aquatic core area components, as well as the entire aquatic/riparian/hydro-

logic network, are meeting their overall objectives. Findings relative to effectiveness monitoring could be used to further adjust the A1/A2 system to better meet its intent.

Summary

The aquatic/riparian/hydrologic component of the ICBEMP management direction uses several tactics to address the goal of maintaining and restoring aquatic habitat consistent with natural disturbance regimes. These tactics include establishing a system of aquatic core A1/A2 subwatersheds as well as establishing a system of Riparian Conservation Areas, broad-scale restoration priorities and strategic

guidance, requirements for multi-scaled analysis, a monitoring strategy, adaptive management direction, and a collaborative implementation structure. These systems and processes are designed to best meet the overall goals of the aquatic/riparian/hydrologic component. Using the step-down process to validate and adjust the A1/A2 system, as well as to identify key areas for extending favorable conditions to achieve overall aquatic/riparian/hydrologic objectives, helps to ensure that the component systems dynamically respond to new information or changes in conditions. Effectiveness monitoring results, and the results of other collaborative processes, such as consultation and recovery planning for listed species, further facilitate the adaptive, dynamic nature of the overall aquatic/riparian/hydrologic component.

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Key Acronyms

A1	Aquatic A1 Subwatershed (6th-field HUC)	NAAQS	National Ambient Air Quality Standards
A2	Aquatic A2 Subwatershed (6th-field HUC)	NAGPRA	Native American Graves Protection and Repatriation Act
AUM	Animal Unit Month	NEPA	National Environmental Policy Act
BIA	Bureau of Indian Affairs	NFMA	National Forest Management Act
BLM	Bureau of Land Management	NOI	Notice of Intent
CEQ	Council on Environmental Quality	NMFS	National Marine Fisheries Service
CFR	Code of Federal Regulations	PAC	Provincial Advisory Committee
CWAP	Clean Water Act Protocol	PFC	Proper Functioning Condition
EAWS	Ecosystem Analysis at the Watershed Scale	PVG	Potential Vegetation Group
EIS	Environmental Impact Statement	RAC	Resource Advisory Council
EPA	Environmental Protection Agency	RCA	Riparian Conservation Area
ESA	Endangered Species Act	ROD	Record of Decision
ESC	Executive Steering Committee (ICBEMP)	SAG	Science Advisory Group (ICBEMP)
FEIS	Final Environmental Impact Statement	SIT	Science Integration Team (ICBEMP)
FERC	Federal Energy Regulatory Commission	SDEIS	Supplemental Draft Environmental Impact Statement
FLPMA	Federal Lands Policy and Management Act	T	Terrestrial T Watershed (5th-field HUC)
GIS	Geographic Information System	TERO	Tribal Employment Rights Office
HRV	Historical Range of Variability	TMDL	Total Maximum Daily Load
HUC	Hydrologic Unit Code	UCRB	Upper Columbia River Basin
ICBEMP	Interior Columbia Basin Ecosystem Management Project	USDA	U.S. Department of Agriculture
IWM	Integrated Weed Management	USDI	U.S. Department of the Interior
MIST	Minimum Impact Suppression Techniques	USFWS	U.S. Fish and Wildlife Service
MOU	Memorandum of Understanding	WCI	Watershed Condition Indicator
		WQRP	Water Quality Restoration Plan

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